

# INDO-ARYANS:

CONTRIBUTIONS TOWARDS THE ELUCIDATION

OF THEIR

## ANCIENT AND MEDIÆVAL HISTORY.

BY

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IN TWO VOLUMES.

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# PREFACE.

The essays comprised in these two volumes were written at different times, under different circumstances, to meet particular exigencies, without any idea of their ever forming a connected work. Enquiries, however, are often made for copies of some of them, but most of the publications in which they first appeared are now out of print, and cannot be obtained. In printing the essays in their present collected form, the immediate object, therefore, is to make them easily accessible. It is believed also that as contributions towards the elucidation of the ancient and mediæval history of the Indo-Aryans, a subject to which the attention of the learned in Europe is now so earnestly directed, they will prove of some use. Although much written upon of late, the subject is yet very far from being exhausted. And, to quote the language of Milton, "No man, who hath tasted of learning but will confess the many ways of profiting by those, who, not contented with stale receipts, are able to manage and set forth new positions to the world: and, were they but as the dust and cinders of our feet, so long, as in that notion, they may yet serve to polish and brighten the armoury of truth, even for that respect, they were not utterly to be cast away."

The essay on the origin of Indian Architecture was written in 1870 by way of a protest against

the opinion which was then getting very common to the effect that the Hindus had first learnt the art of building in stone from their Greek conquerors. Mr. Fergusson criticised it in 1871, in the pages of the 'Indian Antiquary.' It subsequently appeared as the first chapter of my work on the 'Antiquities of Orissa'; and a second criticism followed in Mr. Fergusson's 'History of Indian and Eastern Architecture.' My rejoinder appeared in my work on Buddha-Gayá, and, in now reprinting the original essay, I have thought fit to embody in it the substance of all the later discussions. Mr. Fergusson's remarks have not been of a comprehensive character, dealing with the subject in all its bearings, such as the public had a right to expect from a ripe scholar and antiquarian of his standing. He seems to overlook, if not to ignore and repudiate, historical evidence, and to confine himself exclusively to the interpretation of ancient lithic remains. Even when he has referred to ancient records, he has not shown that fairness and frankness which were to have been expected from him. Thus, in his most recent work, 'The Cave Temples of India,' (p. 29,) after quoting a short passage from Fragment 25 of Megasthenes, he says: "Notwithstanding this, Bábu Rájendralála Mitra in his work on Buddha Gayá, pp. 167 and 168, asserts that the walls of the city were of *brick*, and as his authority for this quotes the passage from Megasthenes above referred to. Besides being in brick he adds (p. 268), apparently on his own authority, that they were 30 feet in height. In so far

as the testimony of a trustworthy eye-witness is concerned, this statement of Megasthenes is entirely at variance with the Bábu's contention, for the use of stone generally for achitectural purposes in India before Alexander's time; and *pro tanto* confirms the statements made above in the text." Now it so happens that I did not refer to the passage he quotes, nor did I, on my "own authority," assign 30 feet to the height of the walls of Palibothra. As pointed out on pp. 45—46, I quoted from Fragment 26, and gave the usual reference; my critic thought fit not to verify my quotation, but under cover of an "apparently" to denounce me for imaginary shortcomings. Adverting to my wish not to allow my proof sheets to be criticised before I had finally corrected them, he says: 'This, for his own sake, I trust, he will do, for as they now stand they will do him no credit as an archæologist or a controversialist, and he will eventually be forced to retract nearly all he has said in the latter capacity. So far as I am capable of forming an opinion on the subject, the conclusions he arrives at as to the age of the caves are entirely erroneous, and he does not pretend that his explanations of the sculptures are derived either from local traditions, or Buddhist literature, merely that they are evolved from his own inner consciousness. Others may form a different opinion from that I have arrived at regarding his interpretations of the scenes depicted in them; to me they appear only as an idle waste of misplaced ingenuity and hardly worthy of serious

consideration." (p. 58). Again; "But his ambition to be considered an archæologist of the European type, led him to neglect a task for which he was pre-eminently fitted, and to waste his time instead in inventing improbable myths to explain the sculptures in the caves." (p. 60). Such criticisms and abuse pure and simple have been, in regard to me, common enough in his writings for the last ten years, since I had the misfortune to dissent from his opinion regarding the Greek origin of Indian Architecture, and I do not wonder at them. They are, however, by no means ancillary to the ascertainment of truth, nor in any way remarkble as specimens of smart, sensational criticisms. After the samples collected by Disraeli and at a later date by Mr. Jennings, they are tame and common-place enough; only for the sake of Indian archæology, in the field of which I am a humble labourer, I could wish they had never been indicted. All ideas of literary amenity apart, sneers and revilings have never proved effectual substitutes for argument. They do not even suffice to suppress adverse opinion.

Mr. Fergusson's most recent theory on the subject of Indian Architecture, as given in his last work, runs thus: "It may, of course, be disputed whether or not it was, in consequence of hints received from the Greeks that the Indians first adopted stone for architectural purposes; but the coincidence is certain, and in the present state of our knowledge may be looked upon as an established fact.

At the same time though it is almost equally certain that stone was used in India as a building material for engineering purposes and for foundations, yet it is quite certain that nothing that can properly be called architecture is to be found there till considerably after Alexander's time." (p. 29). If I understand this passage aright, divested of its cloud of words, it means that the Hindus knew the art of building before the time of Alexander, and learnt architecture proper, or the decoration of buildings with carved ornaments and mouldings, after their contact with the Greeks. If this be the meaning, I have attained the best part of what I have hitherto contended for. I have always used the word architecture in its ordinary dictionary meaning of 'the art or science of building,' and not in the æsthetic sense of ornamentation of buildings, as distinct from the mere mechanical or engineering art of piling stones or bricks for making houses. That in his earlier writings Mr. Fergusson also used it in the same sense is abundantly evident from the quotations given in the article, and I have no reason to doubt. In availing himself now of the elasticity and plasticity of the word, he has resorted to the best means available to him to get out of an untenable position. It will now rest with him to show that those who could build with stone towers 85 feet square at the base and 28 feet high, could not design carvings or mouldings, and that when they once saw such carvings and mouldings with the Greeks, instead of copying them, they invented a style exclusively their own.

The article on the Funeral Ceremony in ancient India, when first published, was intended to reproduce the ceremony as enjoined in the Áraṇyaka of the Black Yajur Veda. It has now been extended by some remarks regarding the ceremony that was probably current before that, and also by a note on the origin of the myth about Kerberos, which appears to have been connected in some way or other with the most ancient rite of obsequies.

The history of the Sena Rájás of Bengal was originally published in two independent papers, at different times. To obviate the inconvenience of frequent cross references, these have now been amalgamated into one paper under the title of the Pála and the Sena Rájás of Bengal.

The paper on the Bhoja Rájá of Dhár, published some eighteen years ago, led to considerable discussion, in course of which General Alexander Cunningham pointed out several mistakes and misapprehensions on my part. I have now thankfully acknowledged the corrections suggested by him.

The other essays now appear mainly in the form in which they were first published. Had I the opportunity to write them anew, I should have liked to have altered the forms of some, the style of expression in others, and the opinions and colourings in a few cases. The necessary leisure was, however, wanting, and it was thought that it would be better to reprint them at once as they were, than to wait for a time which might not come at all. Positive errors have

been in all cases corrected, and I have taken the liberty to make some additions, modifications, and omissions in accordance with my present knowledge of the subjects to which they refer.

*8 Maniktollah, September 6, 1881.*

# CONTENTS.

# I.

# ORIGIN OF INDIAN ARCHITECTURE.

*Absence of Architectural remains in India of a very remote age.* Opinions of Wheeler, Fergusson, and Mrs. Manning about the antiquity of Indian Architecture. Arguments in favor of such opinions. Such arguments not conclusive. Reasons why old remains are wanting. Grecian architecture. Pillars of As'oka; they indicate the existence of architecture before the time of As'oka. Untenability of the Bactro-Grecian, Egyptian, Assyrian, and Persian theories. Notices of architecture in Pánini, the Mahábhárata, the Rámáyana, and the Rig Veda. Wilson's opinion. Conventionalism in architecture. Tamulian origin of Indian architecture discussed. Classification. Sanskrit works on architecture. Later opinions of Mr. Fergusson.

IT is generally believed that the oldest architectural remains to be seen in India are the pillars of As'oka, and they are not of a greater age than the middle of the third century before Christ. Hence it is, that an opinion is gaining ground that the ancient Aryans were not proficient in the art of building substantial edifices with stones, or bricks, and that the early Hindus were dwellers in thatched huts and mud houses, or structures equally primitive. Mr. Wheeler, in his History of India, imagines that the wall round the palace of Das'aratha was nothing more substantial than a hedge. Following this idea, he supposes the palaces and fortresses described in the Mahábhárata to have been thatched structures, constructed of mats, bamboos, and mud, but devoid of everything in the way of true masonry architecture. Depicting Hastinápur, the capital of the Kurus, he says: "A non-descript population, which may have comprised cultivators, herdsmen, mechanics, retainers, and petty shop-keepers, seem to have dwelt in an assemblage of huts, or houses constructed of mats,

bamboos, mud, or bricks, which was dignified by the name of the city. The palace was very likely built after a similar fashion, though on a larger scale, and with some pretensions to strength. Probably it was a rude quadrangular building, having men's apartments on one side, and women's apartments on the other; whilst the third side was devoted to the kitchens and household servants."* Elsewhere he fancies the central quadrangle of the palace of Das'aratha contained a thatched *granary which formed the treasury.*†

Mr. Fergusson, the highest authority on Indian architecture in his latest essay on the subject, says: "It cannot be too strongly insisted upon, or too often repeated, that stone architecture in India commences with the age of As'oka, (B. C. 250). Not only have we as yet discovered no remains whatever of stone buildings anterior to his reign, but all the earliest caves, either in Behar, or in the western Gháts, show architecture in the first stage of transition from wood to stone."‡ In his lecture on the study of Indian architecture, the same author, adverting to a cave in Behar, observes: "It is a well-authenticated example of his (Das'aratha's) reign, and, though cut in the granite rock, every form, every detail, is copied from some wooden original, shewing that at the time it was executed, stone architecture was unknown in India, and men were only beginning to think of a more durable material. From that time we have hundreds of examples, in which we see the wooden forms gradually being replaced by those more appropriate to stone."§ In his History of Architecture he states: "The Indians first learnt this art from the Bactrian Greeks."|| Elsewhere he says: "We are not surprised to find wooden forms copied in stone in the early caves of the Buddhists about the Christian era, because we know that no stone architecture

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* History of India, I. p. 43.

† Ibid. II. p. 9.

‡ Tree and Serpent Worship, p. 77.

§ Lecture on Indian Architecture, p. 9.

|| History of Architecture, I. p. 171.

existed in India till the Greeks taught them the use of the more durable material."*

Mrs. Manning is of opinion that this teaching commenced a little earlier. According to her, "Alexander the Great left Greek and other foreign artists in India, about the year B. C. 326; and sculptures found in Kashmir, and coins struck in mints established on the Indus, give undoubted signs of Greek influence at dates somewhat earlier than our own era; whilst no Buddhist monument claims to be earlier than about B. C. 247."†

These assertions and opinions have derived great support from the fact of the primitive Hindu religion having been purely domestic, requiring no lordly edifice for its observance. It is not to be denied that the greatest incentives to architecture in ancient times, were the rites of religion and respect for the memory of the dead, and temples and tombs called forth the greatest efforts of the builder. It must follow that where the dead were disposed of on the funeral pyre, and the ceremonials of religion observed by the domestic hearth, or in the courtyard of the house under the canopy of heaven, or a cloth awning,‡ sufficient attention was not likely to be directed to structures that should accommodate large numbers, or last for ages. It is also undeniable that the first attempt of man to build must have resulted in mud huts, or log cabins, retaining closely the character of the caves and excavations on the model of which they were executed and designed, principally, if not exclusively, for the purpose of protection from the inclemencies of the weather, and the attacks of wild beasts. Then would follow the era of domesticism, when men would

* Architecture at Beejapoor, p. 87. † Ancient and Mediæval India, I. p 396.

‡ This was not always the case, for we read in the Rig Veda of "spacious chambers" (Wilson's Translation, II. 321), and "halls of sacrifice," (II. 320) "radiant halls," (II. 59,) and doors are ordered to be thrown open for the gods to enter (II. 72).

build cottages and houses, less for purposes of defence, more for convenience, utility and comfort. Next in order, or perhaps simultaneously, would come sacred piles and monuments for the dead, which would begin to separate architecture as a fine art from mere constructive ingenuity; and prepare the way for palaces, towers and sacred edifices, temples, sanctuaries and public buildings, structures combining the vastness, grandeur, utility, simplicity, and beauty of previous stages, and gradually leading to the perfection of the art.

But I take leave to doubt the accuracy of the conclusion that has been drawn from these general premises. The question at issue is not one of natural sequence, but of dates. Few will deny the order in which the architectural faculty of man has evolved itself, but considerable difference of opinion may exist as to the time when any one nation attained a particular stage in its course of progress. It would be foreign to the subject of this essay to discuss at length the history of architecture among the Aryans from the time they issued forth from the plateau of central Asia to people India, Persia, and diverse parts of Europe, but certain it is that one branch of them, the colonists in Greece, attained a higher pitch of excellence, if not in magnitude and therefore in majesty, but certainly in exquisite perfection of artistic beauty, elegance and taste, than the Semites, or the Turanians, ever did in any part of the world, and the argument, therefore, of the Aryans never having been a building race, may be rejected as gratuitous.

The Grecians may have borrowed the idea of large edifices from the Egyptians, or the Pelasgians, and the most successful building tribes among them may have had some Pelasgic blood in their veins as supposed by Mr. Fergusson, but as a nation they were Aryans, and, having once got the idea, they worked it out in their own way, independently of their teachers. The Aryans who came to India had the same intellectual capacity, and it remains yet to be seen how far they utilised it in the

country of their adoption. They had, it is true, no Egyptian or Pelasgic monuments at hand to excite their ambition, and their religious and funeral ceremonies were not favourable to any great efforts at architecture; but they were not altogether without some Turanian models close by them to imitate; they had some intercourse with the people of the west as far as Egypt, who were all great builders; and, as a civilized race, living in a climate where the periodical rains rendered indoor life for a portion of the year, even for professed houseless hermits, an unavoidable condition of existence,* needed houses and palaces, and it is not to be supposed that they always contented themselves with the most primitive dwellings of wood. "Is it at all likely," asks Mr. Sherring, "that the Aryan race existed in India for between one and two thousand years, that they conquered a large portion of the country, that they attained to greatness and glory, and made wonderful progress in civilization, equalling, if not surpassing, their contemporaries in other parts of Asia, and yet, that, during all this time, they were satisfied with only transitory symbols of greatness, and never conceived the idea of leaving behind them durable monuments of their power, which should hand down their name to many generations? They must have heard of the vast structures erected in Egypt, and of the splendid palaces, and stairs, and pillars, and other edifices, with which the Assyrian monarchs adorned their cities. They were not lacking in genius, or in the desire for knowledge; on the contrary, their minds investigated the highest subjects, and whatever was of interest to humanity in general, they regarded as of importance to themselves."†

* The *Chátúrmásyá* Yága of the Hindus and the *Wasso* of the Buddhists owe their origin entirely to this cause. Travelling during the monsoon rains being impracticable, the monks and hermits were allowed to dwell in houses, and there keep themselves occupied with some ceremonial or other by way of discipline.

† Sherring's Sacred City of the Hindus, p. 22.

It may be said, and very justly, that no amount of *à priori* argument can be of avail against positive facts; and if it can be proved that Greek artists under Alexander, or under his successors, did teach the Indians the art of building in stone, or brick, and that no stone building had existed before that time, all disputation about it would be thrown away. But no such proof has as yet been afforded. The discussion has been carried on the premiss, taken for granted, that no Indo-Aryans could originate stone architecture, and the enquiry, therefore, has been, whence did they get the germs of the art? and, as in the minds of the disputants the idea of perfection of architecture is associated with the Greeks, and as by a strange coincidence some of the most authentic Indian remains hitherto discovered are synchronous with the occupation of the country to the west of the Indus by the Greeks, a conclusion has been arrived at very much, as I believe, against true history. I hold that there is no proof whatever to show that the Indo-Aryans knew not stone architecture before they came in contact with the Greeks, and none, likewise, of their having learnt the art from them. I venture to question the fact that no authentic stone building has been met with of an age anterior to the time of As'oka, but were I to admit it still I maintain that the premiss does not necessarily lead to the conclusion that none existed before that period. I demur, too, to accept the hypothesis that the Græco-Bactrian theory alone can explain the circumstances of the case. The absence of remains does not *ipso facto* imply the anterior non-existence of a thing, and what is true in other cases is equally so as regards architecture, while the disappearance of substantial proof may be attributed to many causes, social, religious, political, and physical, which it is needless here to dilate upon. Moslem fanaticism, which, after repeated incursions, reigned supreme in India for six hundred years, devastating everything Hindu, and converting every available temple, or

its materials, into a masjid, or a palace, or a heap of ruins, was alone sufficient to sweep away every thing in the way of sacred buildings. To take for granted, therefore, the absence of remains as a proof of the anterior non-existence of buildings is to convert the negation of proof into a positive proof.

But is it a fact that there is no proof whatever, tangible or documentary, to show that the Indian Aryans knew and practised the art of building with stone long before the time of As'oka? The very pillars of that sovereign, I believe, afford incontestable evidence to the contrary. As'oka was born and bred a Hindu; he lived and moved amongst Hindus, and had never been beyond the boundary of Hindustan. When he changed his religion, he only gave up one form of Indian worship for another.* His new teachers were likewise Indians; and few of them had seen any place beyond the Indus; for as a race they were not much given to travelling, and the missionaries who did travel were hermits, who issued forth from their country to disseminate the religion of S'ákya, and not to bring home the arts of civilized life, and even if they did attempt it, as hermits, they could effect very little in that way. It was impossible for him, therefore, to bring with his new religion an art, which was, as is presumed, utterly unknown before his time, and to attain in it so high a pitch of excellence as his pillars indicate.

The pillars in question are monolyths forty-two feet seven inches in length, with an average diameter of two feet seven inches; most carefully shaped and polished, rounded with great accuracy, tapering from base to top in a way which implies considerable taste in pillar-making, and surmounted by sculptured capitals of much elegance and beauty. Quarrying blocks nearly four feet square and forty-three feet long is the most arduous occupation in which the Hindus can be employed in the present day, and, even under European superin-

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* *Proceedings*, A. S. B. 1878 p. 11.

tendence, they have but rarely proved equal to it. Certain it is that not a single block of such dimensions has been chiselled within the last fifty years in the Bengal Presidency. How is it to be supposed, that two thousand years ago, they found themselves more proficient at the very first start, without any previous training? Turning, or cutting true, such ponderous blocks into round pillars was even a more arduous and difficult task; but they acquitted themselves in it with equal success. Then the carriage of such unwieldy masses to great distances (and some of the pillars were sent hundreds of miles away from the hill-sides where they had been quarried) and setting them up at diverse and very remote places, demanded an amount of mechanical appliance and ingenuity which could not have been imparted to the people all at once by solitary teachers.

Again, the pillars were used as mere monuments erected singly in distant places to bear only inscriptions,* and the reader is accordingly called upon to accept as a fact that those who, until then, lived in thatched huts, and could not put even rubble stone together to make their dwellings, went, against the natural order of things, which requires that houses should long precede monumental columns,† to the trouble and expense of putting them up merely for purposes of display and ostentation. They presuppose an extent of knowledge and practical proficiency in quarrying, carving and orna-

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* Mr. Fergusson is of opinion that the pillars were originally erected in front of temples, or topes; but the Tirhut pillars, which are still *in situ*, have no mound or ruin of any kind in their close proximity to bear out this supposition. It is, however, possible that temples once existed in their neighbourhood, which have been since completely removed by the Hindus, or the Muhammadans; but the monumental character of the pillars is not thereby affected in the least, while the admission of the existence of temples goes a long way to prove the anterior existence of architecture.

† Cromlechs, and stone circles, and other megalithic remains are perhaps exceptions, but they cannot fairly be included under the head of architectural monuments. They were never formed of dressed stones.

mentation which cannot be acquired within the period of a single reign. It was, no doubt, possible for As'oka to obtain written instructions and descriptions, or the aid of artists from beyond the Indus, but it would be too much to suppose that a man, who had never seen a stone house, and was ignorant of its use, would send to a distant country for quarriers, masons, and sculptors.

Supposing, however, for the sake of argument, that he did send for, or somehow get, the aid of foreign artists, he could obtain it from one of four nations, *viz.*, Greeks, Persians, Assyrians, or Egyptians. Now, of the Greeks in connexion with India, authentic history for our purpose here begins with the invasion of Alexander; but there is nothing to show that Alexander himself did much in the way of architecture on this side of the Indus, besides erecting a few altars, and building two cities, one to the memory of his favourite horse Bucephalus, and the other to that of his pet dog Peritas, and History is silent as to the nature of those cities and the nationality of their architects. Mrs. Manning says, "he left behind him Greek and foreign artists;" but I know not on what authority this statement has been made. Looking to the recent British expedition to Abyssinia no one would assume that he invaded India with any large number of architects and workmen, to leave some of them behind in the country to lay the foundation of Indian architecture. The total period of his sojourn in India extended to only a few months, the greater part of which was devoted to marching from place to place, his stay at any one spot not exceeding a few days, and that under circumstances of military pomp and array which could not possibly afford any opportunity to the conservative Hindus to see and appreciate enough of Grecian civilization to imitate it. Of his Indian dominion Calanus, the gymnosophist, presented to him an excellent image. "He laid," says Plutarch, "a dry and shrivelled hide before him, and first trod upon the edges of it. This he did

all round; and as he trod on one side, it started up on the other; at last, he fixed his feet on the middle, and then it lay still. By this emblem he showed him that he should fix his residence, and plant his principal force, in the heart of his empire, and not wander to the extremities."* His Grecian successors in India were not of sufficient importance, nor did they hold any part of the country sufficiently long, to be the leaders of taste and fashion to such a potentate as As'oka. They had then occupied only for a short time an edge of the dry hide, the border land of the North West, and for all practical purposes do not appear to have exercised much influence on Indian civilized life.

To judge of the past from the present, let the reader take the English nation in India. It has held India for a longer period than the Greeks did Bactria from the time of Alexander to that of As'oka, but yet it has produced no appreciable effect on the architecture of its neighbours. The Bhutanese and the Sikimites have not yet borrowed a single English moulding. The Nepalese, under the administration of Sir Jung Bahadur, are not a whit behind-hand of As'oka and his people. Sir Jung went to Europe, which As'oka never did; still there is no change perceptible in Nepalese architecture indicative of a European amalgamation. The Káshmíris and the Afghans have proved equally conservative, and so have the Burmese. But to turn from their neighbours to the people of Hindustan: these have had intimate intercourse with Europeans now for over three hundred years, and enjoyed the blessings of English rule for over a century, and yet they have not produced a single temple built in the Saxon, or any other European style. Thus the conclusion we are called upon to accept is that what has not been accomplished by the intimate intercourse of three centuries, and the absolute sovereignty of a century, in these days of railways, and electric telegraphs, and mass education, was effected by the Greeks two

* Langhorne's Plutarch, Ed. London 1828, p. 491.

thousand years ago, simply by living as distant neighbours for eighty years or so.

Doubtless private speculators, coming in search of work, could afford a supply of architects to As'oka even when he would not send for any; but no more would architects and masons go to a place for work where stone and brick houses were unknown, and therefore not in demand, than Rosa Bonheur or Landseer think of opening a studio in the capital of Dahomey.

Admitting, however, that As'oka* did somehow get a few master workmen from Greece, or from the Bactrian Greeks, I may ask, would not such people, in the total absence of an indigenous style, reproduce the forms they were most familiar with? There can be only one answer to such a question; but the pillars shew that they are perfectly independent of Greek art of the 3rd, 4th, and the 5th centuries, B. C. None can find in them anything of the Doric, Ionic, or Corinthian columns—nothing to recall to mind the genius of the great masters of architecture and sculpture. Their proportion, their bases, and their ornamentation are all different, and characteristic of an original style, and a style which must have taken centuries before it was brought to the state of perfection in which we find it in the time of As'oka.

The last argument applies equally to the Egyptians. The characteristics of Indian architecture of the first three centuries before the Christian era as preserved in the pillars of As'oka, the caves of Khaṇḍagiri and Behar, and the bas-reliefs of Sánchi, bear no evidence whatever of their being of Egyptian origin. The pilasters, doorways, cornices, brackets, and mouldings of the time were totally different, and cannot by any

* As'oka is said to have built 84,000 stupas in different parts of India. This is no doubt an exaggeration, but there can be no question that he erected a great many, for a good number of them were in existence in the time of Fá Hian and Hiouen Thsang, from 7 to 9 centuries after his time.

and so original that no comparison could be made of it with any art of the western world, is a mere copy of the western art, and that which was immediately copied from local wood-carving, was likewise at the same time a copy of Bactrian stone models. Again, "the knowledge that the architectural history of India commences B. C. 250, and that all the monuments now known to us are Buddhist for at least five or six centuries after that time, are cardinal facts that cannot be too strongly insisted upon by those who wish to clear away a great deal of what has hitherto tended to render the subject obscure and unintelligible."*

General Cunningham gives but a qualified and guarded assent to this opinion. He says: "I agree with Mr. Fergusson in thinking that the Indians in all probability derived the art of sculpture from the Greeks. In the Punjab this would have been introduced as early as 300 B. C., and in a few years it would have found its way to the great capital of Palibothra. I speak now only of the sculptor's art, not of the mason's trade, for I do not suppose that building with stone was unknown to the Indians at the time of Alexander's invasion. On the contrary, I will show, in another portion of this report, not only that stone-buildings were in use before that time, but that some of these are still standing in the present day."† Adverting to the presence of mermaids in the Buddha-Gayá sculptures, he adds: "Their first appearance in the sculpture of As'oka's age is, in my opinion, a strong presumptive proof that the Indians derived the art of sculpture from the Greeks. It is a fact which receives fresh proofs every day that the art of sculpture, or certainly of good sculpture, appeared suddenly in India at the very time that the Greeks were masters of the Kabul valley; that it retained its superiority during the period of the half Greek rule of the Indo-Scythians; and that it deteriorated more

* Tree and Serpent Worship, p. 49. † Arch Surv. Report III, 97.

and more the further it receded from the Greek age, until its degradation culminated in the wooden inanities and bestial obscenities of the Brahmanical temples."*

As regards architecture the reader has thus what are insisted upon with great earnestness by Mr. Fergusson as "cardinal facts" never to be lost sight of summarily set aside by General Cunningham, whose high scholarship, thorough knowledge, personal experience of well-nigh half a century of almost every place of any archæological interest in India, and official position as adviser of the Government of India on matters antiquarian, claim high respect for his opinion. And with such a marked difference of opinion on so fundamental a question in Indian archæology among men who are the greatest experts in the matter, the public may well pause before accepting either the one set of opinions, or the other.

It might be added that, whatever may be the result of modern reasoning on the subject, there are facts noticed in Greek history which cannot be easily set aside, and they all unquestionably prove that architecture of a considerably advanced kind existed in India at the time of Alexander the Great, or well-nigh three quarters of a century before the flourishing period of As'oka's reign. Alexander found in India more than one city furnished with walls and gates (Rooke's Arrian, Vol. II. pages 51-53-77). These walls were of bricks (pages 53-88), and strengthened at intervals by towers (pages 81-89). The city of Palibothra was found by Megasthenes "surrounded with a ditch which took up six acres of ground, and was 30 cubits deep; and the walls were adorned with 570 towers and 64 gates" (page 222.) The wall was in existence when Hiouen Thsang visited Patna in the middle of the seventh century, and its remains are still *in situ*. "During the cold season of 1876, whilst digging a tank in Sheikh Mithia Ghari, a part of Patna almost equally distant from the *Chauk* (mar-

* Arch. Surv. Report III. p. 100.

ket-place) and the railway-station, the excavators, at a depth of some 12 or 15 feet below the swampy surface, discovered the remains of a long brick-wall running from north-west to south-east. How far this wall extended beyond the limits of the excavation—probably more than a hundred yards—it is impossible to say. Not far from the wall, almost parallel to it, was found a line of palisades. The strong timber of which it was composed inclined slightly towards the wall. In one place there appeared to have been some sort of outlet; for two wooden pillars, rising to a height of some 8 or 9 feet above what had evidently been the ancient level of the place, and between which no trace of palisades could be discovered, had all the appearance of door or gate posts."* Megasthenes distinctly refers to the palisades in his Fragment XXV. by the words ξύλινον περίβολον. The passage in which the words occur has been rendered by Mr. M'Crindle thus: "At the meeting of this river (Ganges) and another, is situated Palibothra, a city eighty stadia in length and fifteen in breadth. It is of the shape of a parallelogram, and is girded with a wooden wall, pierced with loopholes for the discharge of arrows,"† Rooke also uses the paraphrase "wooden wall." But looking to the relative positions occupied by the brick and the wooden walls the most idiomatic rendering appears to me to be palisade. Had the brick-wall been wanting, or had nowhere been referred to, I would have preferred the word stockade. Anyhow, seeing that Megasthenes has used the word *peribolon* for brick walls, there is no reason to suppose that the *zylinon peribolon* of Fragment XXV. and *peribolon* of Fragment XXVI. are intended to apply to the same structure. The former refers to a brick wall, and the latter to the palisade before it. In support of this view of the case I may observe that a palisade is a common military contrivance in front of ramparts to the present day.

* M'Crindle's 'Ancient India,' p. 207. † Ibid, p. 66

Arrian in another place, quoting Megasthenes, says,—"The Indians allow no monuments to be raised in honor of the deceased, esteeming their good deeds sufficient to perpetuate their memory, for which reason they make odes and sing songs in praise of them. Their cities are so numerous as not to be easily reckoned. Those which are situate near the sea or any river are built with wood; for no buildings of brick would last long there, not only because of the violence of the rains, but also of the rivers which overflow their banks, and cause an annual inundation over all the flat country. But the cities which are seated on any eminence are frequently built with brick and mortar."*

When Mr. Fergusson brought out, in 1876, his "History of Indian and Eastern Architecture," my book, published a year before, was evidently known to him; for, adverting to the form of the Indian spires, he, in one place, says:—"In his work on the antiquities of Orissa, Bábu Rájendralála Mitra suggests at page 31 something of this sort; but if his diagram were all that is to be depended upon in favour of the hypothesis, I would feel inclined to reject it." (p. 47) But he did not make any reference to my objections to his conjecture about the origin of Indian architecture. He has, however, made an important concession. While persisting in the statement that Indian architecture before the time of As'oka was entirely of wood, he admits, "stone in those days seems to have been em-

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* Rooke's Arrian, Vol. II. p. 122. Πὸλεων δὲ (χαι) ἀριθμὸν οὐχ εἶναι ἀν ἀτρεχὲς ἀναγραψαι τῶν ἴνδικῶν, ὑπὸ πλήθεος ἄλλα γὰρ ὅσαι παραποτάμιαι αυτέων ἤ παραδαλάσσιαι, ταύτας μὲν ξυλινας ποιὲεσθαί οὖ γὰρ εἶναι ἐχ πλινθου ποιεομενας διαρχεσαι ἐπι χρόνον του τε ὕδατος ἔνεχα τοῦ ἐζ οὐρανοῦ χαὶ ὅτι οι ποταμοὶ αὐτοῖσιν ὅπερβαλλοντες ὑπὲρ τας ὄχθαις, ἐμπιπλασι τοῦ ὕδατος τὰ 'πεδια. Megasthenes F.XXVI.

Quae vero in superioribus et sublimioribus (quam inundatio) præcipue vero altis locis positæ sint, ex lateribus et caemento factas esse.

Schmieder's Translation,

ployed only for the foundations of buildings, or in engineering works, such as city walls and gates, or bridges or embankments; all else, as will appear from the sequel, were framed in carpentry."*

Some of his arguments I have already referred to in my remarks on the supposed wooden origin of the Buddhist rails.† The others appear to be of no great weight, and need not detain me here. The admission that the Indians did employ stone in building foundations of houses and in city-walls, gates, bridges, and embankments from long before As'oka's time, goes a great deal further than what its author wished it to go. It throws on the author the onus of proving that men, who could, and did, build stone walls, confined their talent to city-walls and embankments, but could not, or did not, extend it to the superstructure of their houses; that having built a brick or stone foundation as high as the plinth, they encountered some obstacle, intellectual, material, or artistic, to push it higher, and bring it to the level of the ceiling until taught to surmount it by Greek adventurers or their half-caste descendants. The admission drives the reader to the inference that the men who, according to Megasthenes, had built walls 30 feet high, round Palibothra could not feel the advantage of having a masonry wall for their king's residence, or for the protection of his treasury. Such an inference is unjust to a nation whose inventive and intellectual faculties were second to those of no other race on earth, and which in the domain of philosophy attained an altitude which none has yet surpassed.

The only proof the historian of architecture has yet attempted to adduce in support of his opinion is the apparent wooden character of the stone work now extant. But in many instances, as in the nail-head developing into a lotus,‡ the apparent similitude is more fanciful than real, and

* History of Indian Architecture, p 47. † Buddha-Gayá pp 147f. ‡ Loc. cit.

in others it is fully accounted for by that spirit of conservatism of the nation which led the good Abbe DuBois to describe the habits and customs of the Indians to be as indelible as the spots on the skin of the leopard. In art this spirit of conservatism, or mannerism, or survival of custom, is as shown above (p. 29) peculiarly inveterate, and crops up even in the European architecture of the present day, and should not be held at all remarkable in the architecture of India twenty centuries ago. The question at issue is, whether those peculiarities, which are taken to be indications of direct copying from wooden models, are really so, or simply mannerisms of ancient date?—and as yet nothing has been attempted to solve it. In history, as in other concerns of the world, it is infinitely better, on any given point regarding which sufficient data are wanting, to acknowledge the fact, than to conjure up hypotheses hedged in by flimsy pretences of "it seems," "it is probable," "it is very likely," which, when proceeding from men of high standing and undoubted talent, serve only to mislead the unwary public. Ancient Indian history, from its hazy character, has suffered particularly from hasty generalizations and *ex cathedra* assertions, and we cannot be too careful in guarding it against them.

Since the date of the stone plinth and city, walls Mr. Fergusson has made another concession. His latest remark on the subject occurs, in a speech delivered by him before a meeting of the Institute of British Architects; it runs thus: "It is quite certain that the classical style with which it (Afghan style) is mixed never penetrated—except sporadically—beyond the Indus. It was there met by a style with which we are perfectly familiar in the third century before Christ and from that time onwards. It is perfectly Indian and original, and, if never carried westward out of India, it certainly never was imported. It was invented and perfected in India and spread eastward through the whole Indo-Chinese coun-

tries."* So far the object with which the above remarks had been written has been completely attained. The position assumed by me that Indian Architecture was "self-evolved, and self-sustained" has been admitted without any qualification by the highest English authority on the subject—one who had entertained the strongest opinion against it, and the subject might have been fairly dropped. Mr. J. Burgess, Archæological Surveyor of Western India, has, however, put a commentary on the passage quoted which necessitates a few remarks. He says, "It is hardly worth while pointing out to your readers what Dr. Rájendralála himself fails to see. Mr. Fergusson holds that so far as we have any remains of early stone architecture in India, it dates from after B. C. 330—the Macedonian invasion. He holds also that, though the Hindus of earlier days have left us no lithic remains, those of later times who have, do not seem to have copied the style of their works from Greeks or Bactrians, but like every race having truly living idea of art, invented and perfected their own styles. These are two co-ordinate parts of a theory. Dr. Rájendralála, however, not only fails to see their consistency, but he seems to think the one destructive of the other. Now how can any one reason with an opponent who cannot understand that the Hindus of 300 years B. C. may have got the hint that buildings could be made in stone quite as well as wood, and, availing themselves of their lesson, they most naturally copied and adopted their own earlier wooden style to the new material. But we do not even say the Hindus had no stone buildings before the time of Alexander; we say, we know of none."†

I feel pretty certain that this commentary has been written without the knowledge of Mr. Fergusson, and I am disposed to believe also that he will not subscribe to it. Certainly it is

* Transactions of the Institute of British [illegible]

† *Bombay Review*, March, [illegible]

that in 1872, he repudiated the idea of dating the commencement of stone architecture in India from the time of Alexander (B. C. 328). He dates it from the time of As'oka B. C. 250. It is equally true that he, at one time, attributed the origin of Indian architecture to foreign influence. In support of this assertion I have to refer the reader to the numerous quotations given above. Two of them I shall here repeat by way of contrast. In his 'History of Architecture' (I. 171) he says, "THE INDIANS FIRST LEARNT THIS ART FROM THE BACTRIAN GREEKS," and in his 'Architecture of Bejapoor' (p. 87) he elaborated this by adding "we are not surprised to find wooden forms copied in stone in the early period of the Buddhists about the Christian era, because we know that NO STONE ARCHITECTURE EXISTED IN INDIA TILL THE GREEKS TAUGHT THEM THE USE OF THE DURABLE MATERIAL." The reader has only to mark the contrast between "they did not copy the style of their works from Greeks and Bactrians;" "they invented and perfected their own style," on the one hand, and they "first learnt the *art* from the Bactrian Greeks," and "the Greeks taught them the use of the durable material," on the other, and he will easily perceive whether the contradiction is due to my obtuseness or perverseness, or to a change of front effected under cover of a shower of scornful remarks as unworthy of a gentleman in the position of Mr. Burgess, as of the subject on which he wrote. Doubtless the word "taught" in the extract might be appealed to as a help by the commentator, but it would subserve no useful end, for Mr. Fergusson, in the quotation given on page 46, admits that the Indians knew the use of stone, and did use it in the construction of walls, and plinths, and bridges before the time of Alexander, and his contention is limited to architecture proper as opposed to mere mechanical, or engineering, construction. The contention is based on the wooden theory, which, I believe, I have clearly shown to be untenable.

# II.

# PRINCIPLES OF INDIAN TEMPLE ARCHITECTURE.

Shape of the original habitation of man. Oldest lithic monuments, rectangular. Indian temples, cubical. Module of Benares temples. Bengali temples. Orissan temples; their projections; steeples; upper chambers; plinths; pinnacles; porches; dancing halls; refectories; court-yards, entrance gates. Materials used in the construction of the temples,—laterite, sandstone, chlorite, granite, gneiss, bricks. Mode of building; irregular, horizontal, and cyclopean styles. Mortar; clamps; ghooting or kankar cement; architraves; beams; wood.

CONSIDERABLE differences of opinion exist as to the form which was first adopted by man for the formation of his dwelling. The models he had before him to work upon were natural caves or caverns, which were all more or less rounded, and deficient in sharp well-marked angles, and they led to the theory that the earliest habitations of the human race were circular in plan, and rounded in form. In support of this opinion, it is said that the dwellings of the ancient Gauls were circular huts built with wood, and lined with mud; and the pile huts of Switzerland were of a similar nature.* On the other hand, nothing was likely to prove more troublesome to primitive builders than circular designs, and the earliest examples of dwellings still extant in America, Africa, and Oceania, are mostly rectangular, *i. e.*, those houses which are intended to be permanent and fixed, have straight sides, and rectangular corners, while those which are intended to be easily moved about, are more or less circular. Ascending

* Lubbock thinks they were rectangular. Prehistoric Times, p. 126.

from wood, wattle and mud to bricks and stones, this view of the question appears to receive peculiar confirmation; for the oldest houses and temples were, with a few rare exceptions, straight-lined in their ground plan, and perpendicular for at least a part of their height. The oldest lithic monuments of human art still extant, are the Pyramids of Egypt, and their chambers bear out this opinion in every particular. They are all rectangular enclosures with upright walls. The temples of that country were also of the same character, and the palaces, of Assyria and Babylon did not anywhere depart from this rule. Some of the Pelasgic tombs in Greece enclosed circular chambers; but as they were erected long after the time of the first ten dynasties of Manetho, and produced at a period when the art of building had been brought to a comparatively high state of improvement, they cannot controvert the theory regarding the outline of the earliest buildings. It may be stated, however, that while in buildings the circular form is difficult, in graves, it is the simplest, and most readily produced, nature helping in a few years to complete where the art of man fails to attain the object, and the transition from the circular to the rectangular plan, as in the Pyramids, implies a considerable advance in civilization and architectural ingenuity.

Ground-plans of temples.

As regards temples in Northern India, the rectangular plan was everywhere the most prevalent, and it is difficult to notice an exception to the rule. At first sight the topes may appear to be different; but if their character be carefully studied it will be found, that there was no departure from the rectangular design of temples. The Dehgopas of Burmah are mere local adaptations of the Indian tope, and none of them is of greater antiquity than the middle of the 6th century, A. D.; and as they are funeral, or cinerary monuments, and not temples, they may be left altogether out of consideration. It is said that there are, in some parts of Bengal, temples designed for the observance

of the mystic rites enjoined in the Tantras, which are triangular in their ground-plan; but as they are recent structures, designed for a sectarial purpose, they do not contradict the remark regarding the primitive form of Indian temples. Generally speaking temples in Northern India are not only rectangular in plan, but cubical in the form of their body. From Orissa to the foot of the Himálaya, there is scarcely a single exception to this rule.* In the *Agni Puráṇa*,† it is ordained, that the ground plan of every building should have four equal sides, and the *Jnána-ratna-prakás'a*‡ and the *Mánasára* support the same opinion. Figures of Vishṇu and some other divinities may be found located in oblong rooms, but such structures are nowhere reckoned as temples *(mandirs)*. Again, in Southern India, the square chamber for temples appears to be the rule, and oblong cells the exception. At the same time I must add that in some of the largest temples I have measured, including the most ancient one at Buddha-Gayá, I have found a slight difference between the lateral and antro-posterior measures, amounting to about 2 to 6 inches in 20 feet or more.

Ground-plans of houses.

In the case of buildings other than temples, the ground-plan no doubt varied according to circumstances, and works on architecture describe a great number of forms. The *Rája-mártanda*, an astrological work ascribed to Rájá Bhoja of Dhár, enumerates sixteen different kinds as the most noteworthy. These are; *1st*,

* The chamber of the *Jyesthes'vara* temple on the Takht-i-Suleman hill, in Káshmir, is circular, but its ground-plan is a square with the corners notched with three salient and four re-entering angles.

† चतुरस्रीकृते क्षेत्रे दशधाप्रतिभाजिते ।
चतुर्भागा भवेत् भित्तिः शेष गर्भगृहो भवेत् ॥
Agni Purána, Ed. Bib. Ind. p. 122.

‡ प्रासादं सम्प्रवक्ष्यामि सर्वसाधारणं शृणु ।
चतुरस्रीकृतं क्षेत्रं भजेत् षोडशधा बुधः ॥
MS. As. Soc. J. R. P., fol. 51.

oblong,—*A'yata;* 2*nd,* square,—*chaturasra;* 3*rd,* circular,—*vritta;* 4*th,* oblong, with a rectangular court-yard in the middle, very like the Roman compluvium,—*bhadrásana;* 5*th,* discus-shaped, *i. e.*, circular with lunette projections, or wings, on the four sides,—*chakra;* 6*th,* linear or long and narrow with two unequal wings,—*visamavâhu;* 7*th,* triangular,—*trikona;* 8*th,* cart-shaped, or quadrangular, with a long triangular projection on one side,—*s'akuṭâkṛita;* 9*th,* staff-like, or long and narrow like a barrack,—*daṇḍa;* 10*th,* quadrangular, with the opposite sides hollow-arched, or concave, like the mouth of the musical instrument called *panava,—panavasañsthána;* 11*th,* like the musical instrument called *muraja,* (I know not what this is); 12*th,* wide-fronted,—*vrihanmukha;* 13*th,* heart-shaped, like a palm-leaf fan,—*vyajana;* 14*th,* circular with five projections like a tortoise with its four projecting feet and head; 15*th,* arched like a bow,—*dhanuh;* 16*th,* horse-shoe-shaped like the winnowing fan,—*súrpa.** Of these the oblong with a rectangular court-yard in the middle was held in the highest estimation, and still continues the favourite, almost every Hindu dwelling house of any pretension in Bengal being built in that plan, whence *bhadrásana* has become the ordinary name of a dwelling house in the present day; and in the north-west it is very common. For comfort, convenience, light, and ventilation, it is, perhaps, the best that could be designed in a warm climate, and it is worthy of note that European architects have of late adopted it in designing several public buildings in Bengal. This court-yard is the same with the *Atrium* of the Romans with its *compluvium* and *impluvium,* the *cortile* of the Italians, and the *Patio* of the Spaniards. Adverting to the last Mr. Digby Wyatt says:

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* आयतं चतुरस्रञ्च वृत्तं भद्रासनन्तथा ।
चक्रं विषमबाहुञ्च त्रिकोणं शकटाकृतिम् ॥
दण्डं पणवसंस्थानं मुरजञ्च वृहन्मुखम् ।
व्यजनं कूर्म्मरूपञ्च धनुः शूर्पञ्च षोडश ॥

"nothing can be more picturesque, or better suited to the climate than these Patios, since owing to the deep arcades which surround the open court-yard (the cavedium) upon more storeys than one there is always some portion of the arcade in which shelter can be obtained from the sun or wind, and in which the occupants of the several apartments can sit and work, or lounge or smoke in abundant, but not unbearable, light and perfect comfort. This facility of outlet enables them, during the hour when the sun shines most fiercely, to keep the living and sleeping rooms dark and cool, and in exactly the state to make the midday meal and subsequent siesta truly luxurious and refreshing."* Replace the word *Patio* by *Uthána* and the description would, word for word, apply to the Bengali court-yard of the better classes of houses. In the *Mrichchhakatika*, which dates from the first century before Christ, there is an account of a house of this description, which had successively eight court-yards.† In the Ain-i-Akbari the palace of Mukunda Deva, of Orissa, is said to have included nine such court-yards, and the Kaisarbág palace of the late king of Oudh included fourteen such court-yards.‡ And the grandeur of a house is generally reckoned in almost every part of India in accordance with the number of court-yards it comprises.

The merits of these several kinds of houses are thus described in the *Rája-mártaṇḍa:* "The oblong insures success everywhere; the square brings in money; the circular promotes health and prosperity; the rectangular with a court-yard fulfils all desires; the lunetted-wheel causes poverty and the unequal-winged, bereavement; the triangular makes the owner a king, and the cart-shaped leads to loss of wealth. Cattle die away if the plan be staff-like, and vision is lost by the *panava* shape. The *muraja* shape causes the death of the

* An Architect's Note-book in Spain, p. 4.

† Wilson's Hindu Theatre, I, p. 82 ‡ Antiquities of Orissa, II, p. 164.

owner's wife; the wide-front, loss of wealth; and the fan-shape, loss of situation. The tortoise leads to theft, so does the bow-shape; while the horse-shoe form causes loss of wealth."*

Regarding the nature of the ground on which the house is to be built, it is said; "men prosper, if the ground slope to the east; wealth is acquired, if the southern side be elevated, but it is lost if the west side slope down, and there is certain destruction if the north side be high."† As domestic architecture, however, does not fall within the scope of this essay, it is not necessary to enquire into the subject further.

Relative proportions of Benares temples.

According to the builders of Benares, the body of the temple is the module upon which the rest of its parts are to be calculated. The length, breadth and height of the body should be the same, and its steeple, *Surrá*, Sk. *chúḍá*, should vary, according to the size of the temple and the number of pinnacles it is intended to bear, from 1¼ and 1½ to 2 and 2½ lengths.‡

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* आयते सिद्धयः सर्व्वाश्चतुरस्रे धनागमः ।
वृत्ते पुष्टिश्च वृद्धिश्च भद्रासने कृतार्थता ॥
चक्रे दारिद्र्यमेवोक्तं शोको विषमबाहुके ।
नृपभीतिस्त्रिकोणे च शकटे च धनक्षयः ॥
नश्यन्ति पशवो दण्डे पणवे लोचनक्षयः ।
सुरजे म्रियते भार्य्या अर्थनाशो वृहन्मुखे ॥
व्यजने वित्तनाशः स्यात् कूर्म्मे वन्धनपीडनम् ।
चापे चौरभयञ्चापि सूर्प्पे च धनसङ्क्षयः ॥

† स्यादुन्नतिः पूर्व्वनते नराणां वास्तौ धनं दक्षिणभागतुङ्गे ।
क्षयो धनानां विनते प्रतीच्यामुच्चैर्विनाशो ध्रुवमुत्तरेण ॥

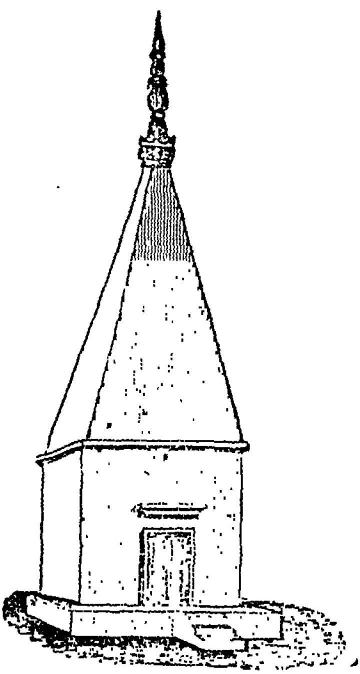
‡ The head *mistri* of the *Mahárájá* of Vizianagaram is my principal authority, and I had his opinion tested by two other builders at Benares. The practice is to divide the temple into three parts; *1st*, the plinth or *kursi*; *2nd*, the body or *janghi*, including the cornice and the base mouldings; *3rd*, the spire or *chúḍá*, comprising base mouldings, spire proper, turrets, pinnacle, trident, and flagstaff. James Prinsep has noticed the same arrangement, but he does not give their relative proportions. *Prinsep's Benares.* Under the head of elevation of a Hindu Temple, Rám Ráz, quoting Kásyapa, classifies all temples into five classes according to their respective heights. Th[illegible] *1st*, *s'ántika*, " moderate ";

The plinth is to be one-ninth of the total length, *i. e.*, one yard if the temple be nine yards high. The door in that case should be 7 feet 5 inches by 4 feet 9". In small-sized temples the door is generally one-fourth of the cube. The first member above the spire, is a thick square plate, named the *Rámarékhá*, from certain denticulations on its edges, having some resemblance to the sectarial mark of the followers of Ráma,—a common ornament for the upper edge of projecting stones. In a temple 9 yards in height, it should be 12 inches in depth. It is intended to cover the vent of the spire, and form the basement of the *kalas'a*, or crowning member of the spire. Above it is placed a small compressed ribbed dome, 15 inches thick, the *amra*, or *amras'ilá*, so called from its resemblance to the fruit of the emblic myrobalan. In the *Agni Puráṇa*, and in the *Mánasára*, it is named *Udumbara*, and likened to the fruit of the *Ficus glomerata*. It is surmounted by a ribbed conical construction called *moní*, and having very much the appearance of a ribbed, inverted funnel, or a lotus reversed, 9 inches long. It has been, by some, called an umbrella. Then follows, the neck, *galá*, 2½ inches, serving as the support of a rounded moulding, *kanganí*, 3 inches thick. A neck then follows and on it is placed a vase, or jar, named *gagri*, the counterpart of the Sanskrit *kalas'a*, a water jar. It should be 18 inches high. Upon it stands a second jar, 9 inches long, sometimes a third of a smaller size, which

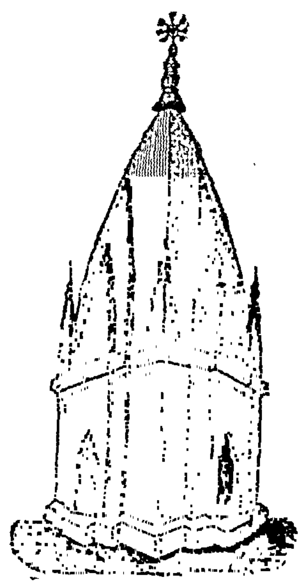
2nd, *paushtika*, "bulky;" 3rd, *jayada*, "triumphant;" 4th, *adbhuta*, "admirable;" and 5th, *Sarvakáma*, "all-pleasing;" the breadth of these five kinds of temples being divided into seven, six, five, four, and three parts, in due order; ten, nine, eight, and seven of those parts are given to their respective heights, (Arch. of the Hindus, p. 39). General Cunningham has reduced these proportions into the following tabular form.

| | | | | |
|---|---|---|---|---|
| 1st | Modest,.. .... ...... ... ........ ....... | height | $1\frac{3}{7}$ | breadth |
| 2nd | Bulky,.. ...... .... ........... ..... .... | ” | 1½ | ” |
| 3rd | Triumphant, ..... .... . .. ... .... .... | ” | $1\frac{3}{5}$ | ” |
| 4th | Wonderful, . ....... ........ . ...... | ” | 1¾ | ” |
| 5th | All-pleasing .............. ....... ...... | ” | 2 | ” |

supports the metal cap and the trident, or the discus, each of which should measure 18 inches in length. The steeple is generally slender, having straight sloping sides, but occasionally its outline is curvilinear. In its simplest form, the steeple rises from above the cornice without any basement; but generally it has four little turrets or pinnacles, *khirkibhadras*, on the four corners. In ornate forms the turrets are ranged in tiers, and their number is multiplied till, in the most elaborate specimens, there are as many as 108 of them, arranged in six tiers.



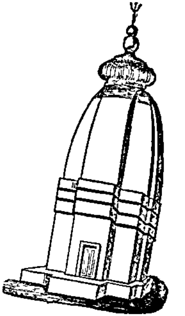
No. 9, Primitive Benares Temple.



No. 10, Typical Benares Temple.

Various kinds of temples compared.

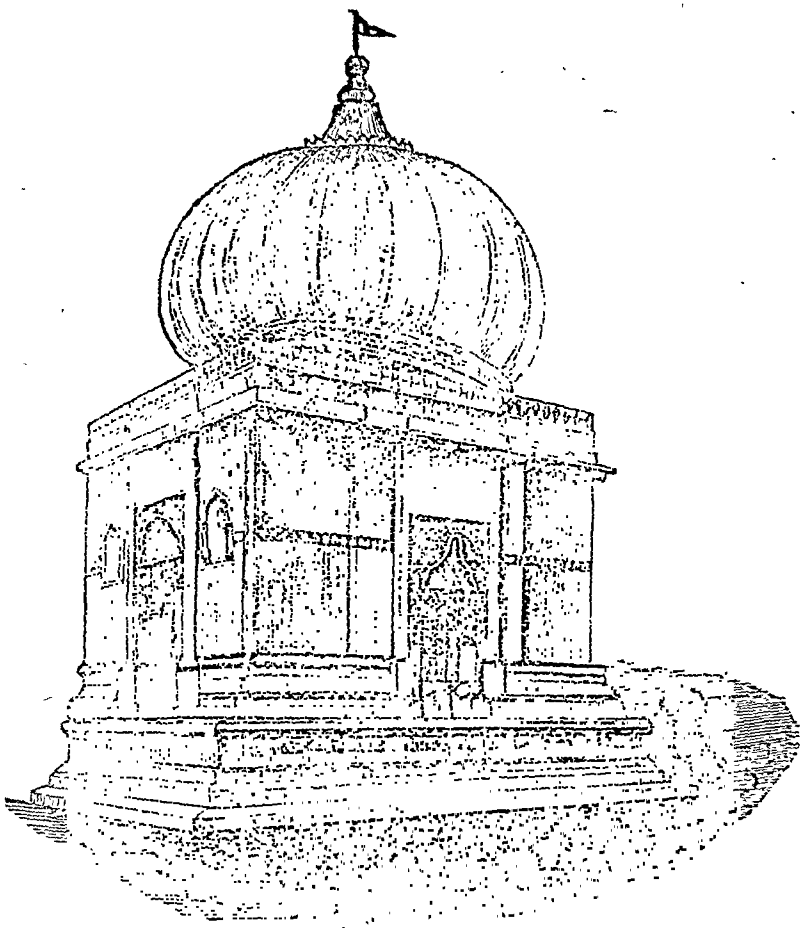
Two specimens of this form of temples are shown above (woodcuts, Nos. 9. and 10). The first (No. 9) has been copied from an original in the neighbourhood of Vis'ves'vara's temple at Benares. It is the simplest of its kind, and has a perfectly plain spire. The second (No. 10) has the surfaces of its walls



No. 11, Typical Orissan Temple.

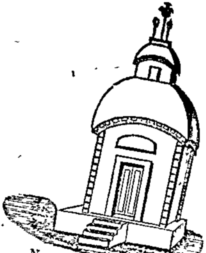
and spire broken by slight projections, and its corners set o[ff]
by partially attached turrets, but without any attempt at o[r]namentation. The most perfect specimens of this style ar[e]
seen in the temples of Vis'ves'vara and Kedára at Benares.*
If they be compared with the Orissan form as delineated in
woodcut No. 11, it will at once be perceived that the latter
had supplied the model on which the former has been built,
but that the builders have greatly improved upon the original
plan. The thick heavy tower of the primitive design has
been replaced by a slender steeple, the projections thereon by
more or less attached turrets, the crowning ornaments reduced
in bulk and improved in appearance, the walls of the body
divested of heavy projections, and embellished with a number
of delicate pilasters, and the whole set off on a well-raised and
elegant plinth. All the improvements, additions and altera-

* Vide Prinsep's Illustrations of Benares.



No. 12, Indo-Saracenic Temple.

tions are, however, strictly Indian and original,—nothing borrowed from people beyond the boundary of this country. In No. 12, the case is, however, entirely altered. In it the body of a pure Hindu edifice is embellished with foiled arches and decorated battlements in the true Saracenic style, and capped with a ribbed dome of the same order,—a combination which destroys the peculiarities of both, and results in a hybrid entirely devoid of majesty, elegance and beauty. Specimens of this mixed, or transitional, style of construction may be found in Benares, Allahabád, Mathurá, and in the Western Presidency generally.



No. 13, Bengali Temple.

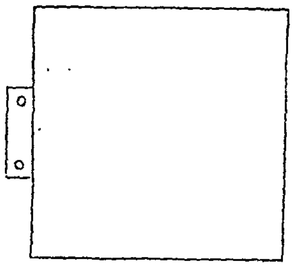
Bengali Temple.

No. 13, represents a specimen of the Bengali style, where the cubical body of a northern temple is covered over by four curvilinear sloping roofs in exact imitation of thatch, and the point of junction at the centre surmounted by a miniature representation of the original construction. This structure has no distinct cornice, its place being supplied by the arched ends of the projecting roofs under which ornamentations are produced with great care to represent the ends of the frame-work of the thatch. This style is distinct from that of Benares on the one side, and of Orissa on the other, hence it is, that it has become necessary to divide into three groups the style which Mr Fergusson has included under one name.

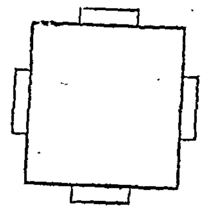
Shape of Orissan temples.

The Orissan temple in its simplest form is a cube, rising from the ground without a plinth, and its tower is the result of four battered walls gradually approaching each other to supply the place of a roof, the top—a frustum—being closed in with a thick slab, which in the Benares, or the Jain, style, is represented by the Rámrekhá. Such a chamber dedicated to an image can require but one doorway, and the first idea of ornamentation would be suggested by the necessity of a drip-stone, or hood-mould, or weather-moulding, over it to throw off rain. To render this moulding effectual, its projection should be considerable, and to support it, two pilasters become absolutely necessary. These produce the most primitive porch, and a great number of such structures may be seen in every

part of Orissa and Central India. From pilasters to pillars, the transition is easy enough, but it has not been frequent, the great majority of temples having pilasters, and not pillars. The foundation of these pilasters causes the first break in the square ground-plan of the earliest temples. [Vide woodcut, No. 14.] *A'priori*, one may suppose that poverty of invention, or more probably a love for symmetry, would lead to a repetition of the projection on all the four sides of the temple-chamber, and this is exactly what is met with in the simpler forms of this class—a square outline with four projections as shewn on the margin: (woodcut No. 15.) The projections in such cases are not deep, and the pillars, when employed, occur only on the side of the entrance. The proportion of the projection to the entire length of the temple varies from 1 to 3 to 2 to 5. The depth of the projections varies even more largely; indeed it is doubtful if there ever was any fixed rule on the subject.

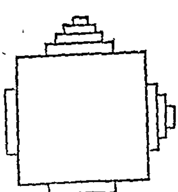


No. 14.



No. 15

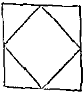
When the architectural advantage of these projections was once perceived, and the nakedness of large walls had to be covered, they were repeated two, three or four times, as is to be seen in the temples of Rájarání, Kapiles'vara, Rámes'vara, &c., &c. (woodcut No. 16). The next step towards improvement, was the development of these projections into distinct pilasters, such as are to be seen on the temple of Ananta-Vásudeva at Bhuvanes'vara. The three-fold projection of each side is there converted into seven pilasters by slight intermediate breaks, and the artistic effect is thereby very much heightened. On the great tower of Bhuvanes'vara



No. 16.

nd other large structures, the same arrangement has been arried out to great advantage. When these projections are articularly deep, and the intermediate spaces wide, they assume the character of buttresses, which add considerably both o the mechanical strength and the beauty of the buildings by n agreeable play of light and shade. But whether deep and vide, or flat and narrow, they are always carried on along the vhole length of the structure to the top of the spire, and vhen divided into pilasters of low relief, they give a ribbed, r fluted, appearance to the whole. On richly ornamented temples they are, on the steeple, carved into strings of small models of temples in some relief, so as to obviate the æsthetic defect of slender pilasters of greath length. On the body of the building, the same object is attained by opening two or three tiers of niches for the reception of statues, or bas-reliefs. At Benares, the projections under notice are either omitted or shaped into pilasters, and the little models are more or less detached from the spire so as to produce distinct chaplets or, pinnacles, which greatly improve the appearance of the building. In Jain temples, these pinnacles are completely detached so as to convert them into little pavilions. In Bengal they are altogether wanting.

Ignorant of the principles of the true arch, the architects

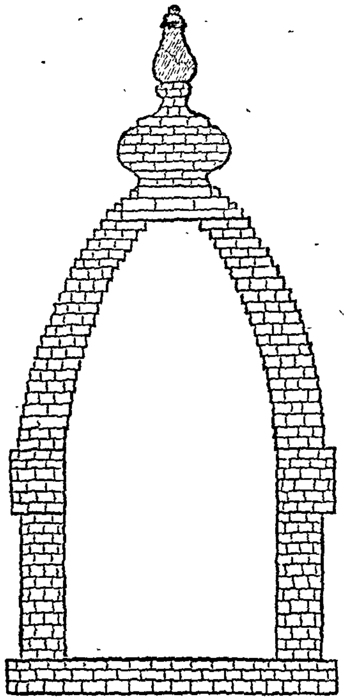


No. 17.

Tower.

of Orissa found the greatest difficulty in covering large areas with a substantial roofing. The Jain plan of triangular blocks cutting off the, corners of the original square, and by two or three repetitions reducing considerably its size, so as ultimately to be fit to be covered by a single block of a moderate size, (woodcut No. 17,) was not sufficient for them, and single slabs could seldom be found of sufficient length and breadth, and so free from defect, as to suffice for temples of the size of the Great Tower of Bhuvaneśvara. Their only resource was, therefore, the hori-

zontal arch of parallel projecting courses of stone in flat layers, or corbelling, which they could carry out to any extent they chose (woodcut No. 18). As they always built with stone, and that material was nowhere scarce, the great thickness required in the supporting walls to resist the weight and thrusts of a large mass of superstructure was to them, a matter of no consideration, and the great height to which they had to carry their towers to close large areas by very gradual projections, served only to heighten the grandeur and majesty of their sacred piles. The edges of the projecting stones, both within and without, were so cut off, as to produce an even outline; but sometimes the inner edges were decorated with mouldings, or left untouched, giving to the ceiling the appearance of a flight of steps reversed. The plain of building adopted, was the simplest, and at the same time the most effectual.



No. 18, Section of an Orissan Temple.

In the middle of the 7th century when the Great Tower of Bhuvanes'vara was erected, the builders had acquired sufficient proficiency in balancing their materials in a projecting arch to avoid the necessity of lofty towers, and yet the artistic effect of the tower being highly prized, they generally utilised the space within it by dividing it into two or three storeys; the rooms being used for the deposit of jewelery and other valuable treasures of the temple; serving thus the same purpose which the opisthodomus did in Grecian sanctuaries. The chambers are never accessible to outsiders, but I noticed that they were sometimes lighted, and ventilated by small openings

in the spire. The stairs are enclosed within one of the walls of the temple, and reached through the sanctuary itself. It is said by the priests at Bhuvanes'vara, that about a hundred years ago, a man had ascended with a lamp in hand to the upper storey of the Great Tower, but through the displeasure of the presiding divinity, he was suffocated to death before he could attempt to retrace his steps, and that, ever since, nobody had attempted to explore that much dreaded chamber. The tower of the great temple at Puri, has, likewise, some rooms within it, but they too are not in use now These facts suggest the idea, that the openings for light and air are inefficient, and the mephtic vapours which have accumulated within, render them unapproachable. In the temple at Buddha Gayá, there are two moderate-sized windows to give light to the upper chambers.

Plinth.

In plain temples, the plinth is, as already stated, generally wanting, and the body of the edifice rises from the surface of the ground with which the floor is flush. But in elaborate structures there is generally a basement or platform of some pretension, varying in height from two to five or six feet, and diversified by a variety of bands and mouldings, or broken in their outline by projecting pedestals of various shapes.

Pinnacle.

The pinnacle includes most of the elements of the Benares *Kalas'a*, but their relative proportions are entirely different. The square plate *rámarekhá* on the top of the steeple, is small in size, and of slight thickness, having more the appearance of the plinth of a pillar, held very much within the flattened top of the steeple, than of a massive covering for the head, projecting considerably beyond its area. It is, besides, invariably plain, and has none of the denticulations which give it its peculiar name. Above it, a narrow neck of low height supports the *amlas'ilá*, which, instead of being of the small size and insignificant appearance common at Benares, assumes the proportions of

le, the most conservative of conservatives, is by no means extraordinary ; and that in its transit from earth to stone, it should be improved and embellished is but natural, and a matter of course. In Orissa, the jar is never repeated, but in the North-Western Provinces, where the people carry on their heads two, three and sometimes four pots of different sizes, the kalas'a is repeated two or three times on their temples.

The Orissan name for this temple is *dewul* Sanskrit *vimána*. It occupies the place of the European *naos*, *cella*, *adytum*, ἄδυτον, or sanctuary, being the abode of the visible representative of the Godhead. It has an *edos* on the side opposite the entrance, on which the image or images are seated. In all well-ordered fanes this raised platform, or throne, is made of stone, and finished with great care ; but in poor and more recent temples it is replaced by a wooden chair. In S'ivite temples, it is entirely wanting, and the image is placed in the centre of the floor.

Porch.

Allusion has already been made to the porch in its simplest form, consisting of two pilasters sustaining a projecting weather-moulding. The transitions from pilasters to detached pillars, and from a simple moulding to an architrave and cornice, appear to have taken place at an early date ; for this arrangement is observable in some of the oldest and least pretending edifices. Occasionally, but rarely, the pillars were placed in a recess made for the purpose in the wall, and it gave to the front somewhat the appearance of what in Grecian temples is called *in antis* ἐνπαραστάσι. In the North-Western Provinces two additional columns were soon added, which, with a pyramidal roof, produced a detached pavilion, or kiosk, in front ; and this has since been greatly improved, particularly in Jain temples, by multiplying the columns and extending the area of the building. But in Orissa the change did not sort with the massive character of the larger temples, nor suit the requirements of the priests,

who, probably, thought the light admitted into the sanctuary through its single door too much for the mystic character of their rituals, and the generally unattractive appearance of the idols. A walled building was, therefore, preferred to an open, columnar, or arcaded, one; and for the sake of variety, and to mark the distinction between the temple and its porch, its top was closed with a pyramidal roof instead of a steeple. The Orissan name for this structure is *Jagamohan*, "the fascinator of the world," or the 'audience chamber,' for it is from this place that the public are allowed to behold the divinity within. It may be compared to the *prodromus* or *pronaos* of ancient, and the vestibule of mediæval, European temples. According to Kásyapa, it is the *Antarála* or ante-temple.*

The ground-plan of this structure is generally, though not invariably, a square, and its walls are diversified with the same kind of projections as those of the temple itself. At first sight it would appear to differ from the temple in having four doors instead of one; but as frequently, two of them, those on the flanks, are closed either by mullion bars, or lattice work, and the third is brought in contact with the entrance to the temple, there is virtually only one entrance to it.† But it differs from the temple in height, in the form of its roof, and in having, in structures of large dimensions, four or more pillars arranged in two rows, which divide its floor into a nave and two aisles, or make it a distyle hall. Its height is fully one-third less than that of the temple. The plinth is invariably of the same height, the walls to the cornice generally correspond, but the pyramidal roof is entirely different, and so are the decorations on the walls. The roof is a repetition of the cube of the body with the sides and top cut off

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* Rám Ráz's Architecture of the Hindus, p. 49.

† At Koṇárak, all the four entrances are left open, and embellished with large figures of horses, lions and elephants. Some of the minor porches, such as that of Purasurámes'vara's temple at Bhuvanes'vara, have two or three doors on each side, and their ground-plans are oblong.

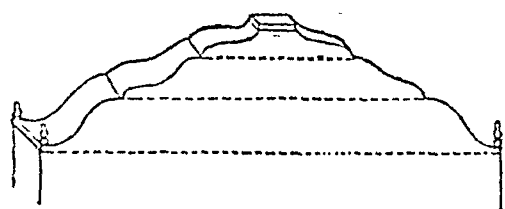
to produce its peculiar shape. This is, however, not invariably the case: in two or three instances the sloping roof after being carried to some height is broken by a regular clear-story with windows opening all round at short intervals to admit light. The truncated top of the pyramid, where the pyramidal form is adopted, is surmounted by a domical structure of which the most prominent members are the same as on the temple, *viz.*, the amla fruit, and the reversed lotus; but they are repeated, the lower globe very much compressed, and the lotus elongated into an umbrella crown. The upper members remain untouched The kalas'a is a repetition of what occurs on the temple

The constructive peculiarity of the roof will be best understood by a reference to the plates annexed to my Antiquities of Orissa. On the outside it is formed of courses of receding stones, broken at intervals by projecting ledges so placed as to balance the materials, and throw the weight of the roof on the sustaining walls. These ledges are arranged into one, two, or three groups, according to the size of the building, each comprehending, four tiers. Sometimes, the ledges are wanting as shewn in the woodcut No. 19. The outer borders of the ledges, where they exist, are richly ornamented with floral bands, or groups of animals in low relief. The inner face, or ceiling, is built on the same principle, but it is not of a piece with the outer face. It is formed of three independent series of parallel projecting courses with the tops closed in by single slabs, or spanned by iron beams, and covered over by several flags of stone. Probably the ceilings were built first, and the outer structure afterwards and independently of it, for the ceilings have dropped down in several ruined porches, leaving the outer shell entire. In small porches, where no pillars are used, triangular slabs placed in the corners, sufficed to support the pyramidal superstructure.

Originally, nothing further was needed to complete a temple, but in course of time two other buildings were added in a line with the porch. The first was called the *Nátmańdir* or "the dancing hall," Sanskrit *Maṇḍapa*,* and in front of it, (2nd), the *Bhogamandir* or "refectory"; and all large establishments now include this four-fold arrangement.

Nátmandir.

The *Nátmandir*, as its name implies, is a festive hall, large, spacious, and open on all sides, corresponding with the *chaultry*, or "marriage hall" of Southern India, except that the sides are not arcaded, but provided with doors, three to four on each side. Its ground plan, unlike that of the temple and the porch, is oblong, and it is connected with the porch behind, and with the refectory in front. Its roof, like that of the porch, is supported on pillars, and constructed on exactly the same principle; but the peculiar projecting ledges and the pinnacle are wanting, and its slope is less. The walls are devoid of sculptures, and not quite so high as those of the porch. Woodcut No. 19 represents the roof of the dancing hall of the Great Tower at Bhuvanes'vara.



Bhogamandir.

The refectory is a square room having only two doors, one opening into the dancing hall, and the other in front. Its pyramidal roof generally, though not invariably, corresponds with that of the porch, and its walls are profusely ornamented with a variety of floral scrolls and mouldings. It is, however, lower than the dancing hall, which on its part is lower than the porch

* Rám Ráz writes, Mantapa, but that is not Sanskrit.

and is, in every instance that I have noticed, a subsequent addition, and not synchronous with the temple.

This fourfold building is generally surrounded by a high wall, enclosing a large area of ground which forms what was in Grecian temples called ἱερον or τεμενος, "the sacred enclosure," which included all the appurtenances of the sanctuary: sometimes a second wall was built round the first, producing two court-yards, an inner and an outer one. The walls, which may be likened to the περιβολος or sacred fence of the Greeks, were invariably plain, both inside and outside, in marked contrast to Buddhist railings which are most elaborately sculptured. At Bhuvanes'-vara the wall is capped with a simple coping, sloped on the upper surface, and having a projecting drip to prevent the wet from running down the surface of the wall; but at Puri and Koṇárak, they are ornamented with Saracenic battlements.

Enclosing Wall.

Originally the enclosure contained nothing beyond the main temple and the necessary out-offices, kitchen, &c.; but the sanctity which attaches to such establishments, induced people to avail themselves of every opportunity of dedicating temples erected within the sacred area, and the result is, that the court-yards, as now found, are filled with a large number of fanes of various sizes and diverse pretensions, so crowded together as seriously to mar the beauty of the main buildings.

All the principal temples face the East, so that the image of the deity within may face the rising god of day, the natural visible emblem of the invisible Godhead. A similar feeling in Greece led, according to Vitruvius, to the entrance to the temples being turned towards the West, so that those who came to worship might behold the statues of the gods towards the East; but it has also resulted in all its principal temples on the Acropolis and those in Attica, Ionia and Sicily, as also those consecrated to the goddess Athénè—the Helenic Dawn, or Ushā,—having

Direction.

an easterly direction, and it may fairly be asked if such an idea has had anything to do with the orientation of many Christian churches? It is worthy of remark that Burmese palaces are always so built as to face the East. The word *Jhé* in Burmese means both east and front,* and many of the chief Buddhist and Jain fanes also face the East; but the principle which guided their position is unknown. In the case of minor shrines of the Hindus, this rule has not been very strictly observed, and many fanes may be seen that have fronts towards the West, South, or North.

It is necessary to note here, with a view to prevent misapprehension, that the *Chaṇḍimaṇḍapas*, or chapels in private dwellings in Bengal, face either the South, or the West, never the East, nor the North, and the priest when engaged in worship, invariably sits with his face towards the East, facing the image of the god, when the chapel is turned towards the West, and having the image on his left side when its direction is towards the South, this is, however, not in accordance with the rules of the S'ástra. According to the *Kálíká Puráṇa* "the side sacred to Kuvera (North) is the most gratifying to S'iva; therefore, seated with the face directed to that side, should Chaṇḍiká be always worshipped." *Digvibhágetu kauverídik sivápríti dáyiní tathá tanmukha ásína pújayechchaṇḍikám sadá.* At Puri and Bhuvanes'vara, with temples facing the East, the priests, I observed, were seated with their faces towards the South. This too is not consistent with the ordinances of the S'ástra, for the *Rudra-yámala Tantra* prohibits the East for S'ambhu, and the West and the North for S'akti. *Na práchímaghratha s'ambhor nodíchim ṣ'aktimasthitam na pratíchím yataḥ prishṭhamatodaksham samás'rayet.* How the priest sits when a temple faces the North, I have never noticed. When people sit to repeat their sandhyá prayers, they turn towards the East, if the worshippers be Vaishṇavas, and towards the

* Yule's Mission to Ava, p. 97.

North if they be S'áktas. The followers of S'iva and Gaṇes'a prefer the North. This likewise is abitrary, and unsupported by the S'ástra. The general rule, according to Vishṇu, is that the worshipper may sit with his face towards the North or the East at his option. *Práñmuko udañmukho vá upavishto dhyáni devatáh pújayet.* Váchaspati Mis'ra quotes an authority which improves upon this, and recommends the East for morning prayer, the West for evening prayer, and the North for prayer at night. *Prákpas'chimodagásyat tu sáyám-prátar-nis'ásu cha.* They never, however, have departed from one of the cardinal points of the compass, which was, according to the S'ilpa-S'ástra, invariably ascertained with a gnomon before a building was commenced.

The mode of ascertaining the sides with some precision, is thus described by Rám Ráz: "On a smooth level piece of ground is erected a gnomon, which according to some 'should be sixteen *aṅgulas* in height, and of the same diameter at the bottom; the whole should be shaped like the leaf of an opening bud, tapering gradually from the bottom to the top.' Around this a circle is drawn with a cord of twice the height of the gnomon, by fixing one end of it to its base, and carrying the other round it. Points are marked in the circumference where the shadow of the gnomon projects, both in the forenoon and afternoon, that is, at any given hour after sunrise, and at the same time before sunset; and between these points a right line is drawn so as to join them; the point marked by the morning shadow will show the East, and that marked by the evening shadow the West. Then from each of these two points, and with a radius equal to the distance between them, describe two more circles cutting each other, and resembling (in their points of intersection) the head and tail of a fish, between which draw a right line, which will point to the South and North. Again, from the southern and northern points, which touch the circum-

ference of the inner circle respectively, and with the same radius, describe two more circles, and the points of intersection on the two other sides will indicate the East and West."* It is obvious that that this is a very clumsy and unsatisfactory method; and those who wish for greater precision select the equinoxes for their reckoning. For astronomical purposes the polar star is believed to be the best guide.

Gateways.

The principal entrance to the temple is placed to the east, right in front of the temple. It is covered by a spacious square building, the *toraṇa* or *gopura*, with a pyramidal roof, having the figures or the nine Indian planets *(navagraha)* sculptured in more of less relief on the frieze under the weather-moulding. The structure, however, has neither the lofty storied character of the Tamulian *gopura*,† which rises from five to fourteen storeys, nor the majesty and massive solidity of the Egyptian pylon, or propylon, but holds a very subordinate place in the whole composition. For guards it has two lions, either seated, or rampant on crouching elephants, a form of grouping to which the Uriyás seem to have been very partial. At Koṇárak and Puri there are also horses and elephants for guards; but they are not common, nor do they at all approach the gigantic size of the human-headed winged bulls and lions of the Assyrian palaces. At Puri there are gateways of about the same size on all the four sides of the enclosure of the great temple; but originally such was not the case at Bhuvanes'varal the two small doors on the north and the south of the Great Tower now visible, being manifestly subsequent additions: there is no opening in its western wall. The roof of the gateway externally is a counterpart of that of the porch on a small scale, but internally it is so arched as to look like the under-surface of a hemispherical dome.

* Architecture of the Hindus, 19.

† *Vide* passim Fergusson's History of Architecture, II., 567.

The details above given refer mainly to Orissan temples. They are not in all respects consonant with the rules laid down in works on architecture. Varáhamihira, in his Brihat Sañhitâ* lays down the following general rules on the subject.

4, 5, 6, 7, 8. "Lakes where groups of lotuses like umbrellas ward off the sun's darting beams, and the waters receive access of brightness by the rows of white water-lilies pushed aside by the shoulders of swans; where swans, ducks, curlews and paddybirds utter their resounding notes, and fishes repose in the shade of Niculas on the brinks; places where rivers flow, having curlews for their tinkling zone, singing swans for their melodious voice, the watersheet for their cover, and carps for their belt; regions where streams have blooming trees on the margin, comparable to ear-oraments, confluences not unlike to buttocks, sandy banks like to high-swelling bosoms, and merry laughter from the swans; tracts of land in the neighbourhood of woods, rivers, rocks and cataracts; towns, with pleasure-gardens: it is such grounds the gods at all times take delight in.

9. The several sorts of soil which we indicated, when treating of house-building, as suited to Bráhmans, etc., are likewise recommended to persons of the different classes, when they wish to erect temples.

10 Let the area of a temple always be divided into sixty-four squares, while it is highly commendable to place the middle door in one of the four cardinal points.

11. The height of any temple must be twice its own width, and the flight of steps equal to a third part of the whole height (of the edifice.)

12. The adytum measures half the extent (of the whole,) and has its separate walls all around. Its door is ¼ of the adytum in breadth and twice as high.

13. The *side-frame of the door* has a breadth of ¼ of

* Journal R. A. S. N. S. VI., pp. 317-321.

the altitude; likewise the threshold; the thickness of both doorposts is commonly stated to be equal to ¼ of the breadth.

14. A door with three, five, seven, or nine-fold side frames is much approved. At the lower end, as far as the fourth part of the altitude of the doorpost, should be *stationed the* statues of the two doorkeepers.

15. Let the remaining part be ornamented with (sculptured) birds of good augury, Çrîvṛksha-figures, crosses, jars, couples, foliage, tendrils, and goblins.

16. The idol, along with the seat (*i.e.* pedestal), ought to have a height equal to that of the door, diminished by ⅛, of which two-thirds are appropriated to the image and one-third to the seat.

17, 18, 19. Meru, Mandara, Kailâsa, Vimâna-figure, Nandana, Samudga, Padma, Garuḍa, Nandin, Vardhana, Kunjara, Guharâja, Vṛsha, Hansa, Sarvatobhadra, Ghaṭa, Sinha, Rotunda, Quadrangle, Octangle, and Sixteen-angle,—these are the names of the twenty kinds of shrines. I now proceed to describe their characteristics, following the order in which they have been enumerated.

20. The Meru is sexangular, has twelve stories, variegated windows, and four entrances. It is 32 cubits wide.

21. The Mandura is 30 cubits in extent, has ten storeys and turrets.—The Kailâsa, too, has turrets, and eight storeys; it measures 28 cubits.

22. The Vimâna is 21 cubits in extent, and has latticed windows.—The Nandana has six stories and sixteen cupolas; it measures 32 cubits.

23. The Samudga (*i.e.*, round box) is round. The Padma (*i.e.* lotus) has the shape of a lotus, measures 8 cubits, has one spire, and only one storey.

24. The Garuḍa and Nandin show the form of the sun-eagle, are 24 cubits wide, must be constructed with seven storeys, and adorned with twenty cupolas.

25. The Kunjara (*i.e*, elephant) has a figure like an elephant's back, and is 16 cubits long, and broad at the bottom. The Guharâja likewise measures 16 cubits. Both have a roof with three dormer windows.

26. The Vṛsha (*i.e.* bull) has a single storey and one turret, is everywhere round, and measures 12 cubits. The Hansa has the form of a swan; and the Ghaṭa, being shaped like a water-jar, has an extension of 8 cubits.

27. The Sarvatobhadra has four entrances, many summits, many beautiful dormer windows, and five storeys, its extent being 25 cubits.

28. The Sinha is a building with twelve angles, and is covered by lions; it is 8 cubits wide. The four remaining (viz., Rotunda, Quadrangle, Octangle and Sixteen-angle) are dark (in the interior.) The Quadrangle has five cupolas (whereas the rest have one only).

29, 30. A storey's altitude is of 108 digits, according to Maya, but Viçvakarman pronounces it to be of 3 cubits and a half (*i.e.*, 84 digits.) As to this, however, able architects have declared that (in reality) there is no discrepancy of opinion, for, if you add the height of the crown-work, the smaller number will equal (the greater).

31. Herewith are the characteristics of temples described in compendious form; it contains (in the main) the whole treatise composed by Garga on it. Of the voluminous works by Manu, etc., have I, in writing this chapter, only taken notice in as much as I remembered."

Material—Laterite.

In a country so abounding in stones of various kinds as Orissa, it is not to be supposed that any other material would be employed in the construction of buildings designed for the habitation of the image of the ever-present God, and intended to last for eternity, and accordingly it appears that they were the only substance used, and not a trace of bricks is anywhere to be

met with. Of stones, the most common is laterite, next sandstone, and, lastly, *mugni*, or chlorite. For outer walls, kitchens, porticos, and all structures of secondary importance, the first is the best suited. It occurs almost everywhere in Orissa within a few feet under the soil, and in many places crops up to the surface. Around Bhuvanes'vara large tracts lie barren, or covered with stunted jungle, from the soil or mould having been washed away from its rocky substratum. In his note on this substance, Mr. W. T. Blanford says: "The form which generally appears at the surface (it being rarely that the lower kind is exposed by the denudation of the upper) consists mainly of round ferruginous nodules, about ⅛ to ¼ of an inch in diameter, in a matrix of dark reddish-brown clay, which is generally more or less sandy. The nodules have a coating of brown hydrated peroxide of iron, and, when broken, some are seen to be black inside; others appear to be formed of concretionary peroxide of iron; others, again, are evidently ferruginous pebbles of decomposed gneiss, or of sandstone, if the rock prevail in the neighbourhood. These little nodules are frequently scattered over the country by the denudation and disintegration of the deposit containing them. In places the substance is so soft that it may be cut, though with difficulty, with a spade; in other places it hardens into a firm rock, sometimes cohering only in the form of large blocks, the intermediate portion remaining loose and gravelly, but frequently forming a hard mass, which covers the surface for considerable areas. It is only at the surface that the rock becomes thoroughly hardened; the lower portion requires exposure to give it firmness and strength: when exposed it becomes cavernous, owing to the washing away of the softer portions, and apparently a chemical change takes place, whereby the iron becomes altered from the state of anhydrous peroxide (and perhaps also of magnetic oxide) into that of brown or hydrated

peroxide. To this chemical change the coherence may perhaps partly be attributed; much, however, is doubtless due to the more thorough drying of the clay by the heat of the sun."*

Dr. Oldham, commenting on the value of the laterite as a building material, observes: "Few rocks present greater advantages from its peculiar character; it is easy to cut and shape when first dug, and it becomes hard and tough after exposure to the air; while it seems to be very little acted on by the weather. Indeed in many of the sculptured stones of some of the oldest buildings, temples, &c., in the district, the chisel, marks are as fresh and sharp as when first built. It is perhaps not so strong, nor so capable of resisting great pressure, or bearing great weights, as some of the sandstones, or the more compact kind of gneiss, but it certainly possesses amply sufficient strength for all ordinary purposes. It is largely used at the present time, but has also been employed from the earliest period from which the buildings and temples of the country, date. * * * Another advantage it possesses over other rocks is the facility of transport, it being generally found in the low grounds, and often at no great distance from some of the many streams which traverse the vicinity. Slabs from four to five feet long are easily procurable of this rock."† Exposure to water does not seem to affect its texture in any way, and it is, therefore, also largely used for the building of ghats and retaining walls on the sides of tanks. Being, however, a nodular conglomerate, it is full of cavities and soft interstices, and utterly unfit, not only for sculptures and fine works, but even for paving and other purposes, where a smooth even surface is required. Dr. Oldham alludes to "elaborate specimens of carving and ornament"‡ made of this stone, but I have nowhere seen any. The simplest

* Memoirs of the Geological Survey of India, I, p. 281.

† Ibid, 276. ‡ Loc. cit.

mouldings of bands and fillets are all that have come under my notice.

Sandstone.

Sandstone is also abundant everywhere. The low range of hills which runs along the whole length of the province, dividing it into two parts, consists principally of this stone, and it is quarried and worked with ease. It is commonly of a grey colour and coarse grain ; but a finer variety of an ocherous tint varying in shade from a light fawn to dark brick-red, is met with at Aṭgharh in the Tributary Mehals, and in a few other places, and is largely used for outer facings of temples, and for sculptures. This variety is of small grain, homogeneous texture, and great firmness, admitting of very delicate carving without breaking or chipping. As it had, however, to be brought from a great distance, the builders generally tried to economise its use, and to replace it by the grey kind whenever it was practicable without injury to the appearance of their work. In Northern India the use of this variety of sandstone is common almost everywhere ; but in the Western Presidency it is replaced by trap and other stones.

Chlorite.

The *Mungni* is a kind of serpentine, or chlorite. It is of a dark slaty colour, and fine composition, susceptible of a high degree of polish, and when polished, it assumes, like slate, a black colour. In the present day it is largely employed in the manufacture of plates, basins, and other domestic utensils. "The rock yields a beautiful, compact and very tough material, though soft and easy to work. It is admirably suited for fine carvings, as may be well seen in some of the beautifully sculptured doorways of the Black Pagoda, which are carved from this variety of rock. Blocks of almost any size can be obtained, the only impediment being the difficulty of transport from the high hills on which it occurs."* It is, however, not met

* Oldham, in the Memoirs of the Geological Survey,—I, p. 278.

with in Cuttack, and the distance from the Nílagiri Hills, in Balasore, where it is quarried, to Bhuvanes'vara and Puri, was so great that its use had to be confined to statuary and finer kinds of sculpture, which were not intended to be much exposed to sun and rain. For facing the suffits and jambs of the entrance to temples, for the paving of the cells, as also for thrones of the sacred images, it was also largely employed; in short, it supplied the place of marble which was not accessable to the Uriyás, and was, and is to this day, held in high estimation.

*Granite.*

In descriptions of Orissan antiquities, granite is frequently mentioned by European writers, but I have not seen it employed for building-purposes either at Puri, or at Bhuvanes'vara. According to Dr. Oldham, than whom few can speak with more authority on questions of Indian Geology, "throughout the country, south of the Mahánadí, dykes of all kinds are rare, trap is entirely wanting, and granitic veins are seldom seen."* It is probable, therefore, that, as in the infancy of geological science at the end of the last and the beginning of this century all hard grey-looking stones were mistaken for granite, non-professional men in Orissa, as elsewhere, frequently took the one for the other. Between thirty and forty years ago the As'oka pillars were described by more than one writer as made of granite, but it is now well-known that they are all formed of sandstone. In the same way Bishop Heber called several structures in Agra and Delhi as constructed of granite, which have since turned out to be sandstone or marble. If true granite, however, is wanting, gneiss is common enough, if not abundant, and a granitiferous variety is frequently employed for statuary, particularly on the A'lti and the Nálti Hills: some of the statues of the Black Pagoda are also said to be made of this material; but the bulk of them are of sandstone.

* Oldham, in the Memoirs of the Geological Survey,—I., p. 264.

No real marble is met with anywhere in Orissa, nor has it been used for temples in Northern India; but in Rájaputáná, Central India and Guzaráṭ it has been often used, and the most profusely sculptured temple in all India, that of Satrunjaya in Guzaráṭ, is built of this material.

Marble.

Bricks are common everywhere, and have been so since the date of the Rig Veda; but the details for manufacturing them have nowhere been given at length. The Sulva Sútras supply rules for the making of bricks for fire altars; thus in one place it is said "the following bricks are to be made for this Chiti; 1 square brick of 20 angulas, 2, oblong bricks of 20 angulas by 30 angulas, 3 oblong bricks of 20 × 10 angulas (made by dividing a brick of the first mentioned class into two oblongs), 4 square bricks of 30 angulas."* These, however, are intended exclusively for altars, and not for houses and temples. The Agni Puráṇa has a few verses for the pugging of clays and the making of bricks, but not of sufficient interest to be worth translation here.

Bricks.

As in design, so in the art of building, Uriyá architects display a sad want of variety. If their temples are all of one plan, they are built in almost the same order everywhere. Possibly at an early stage of their progress, they did try other modes of arranging their materials, but by the middle of the seventh century, they seem to have discovered what appeared to them the cheapest, and at the same time the most convenient, style of masonry, and continued ever after to practise it without any variation. This was to arrange courses of oblong ashlars of the same height, which were held together by their weight, by their perfect adjustment, and by the frequent intervention of bonders long enough to extend to a considerable distance

Style of buildnig.

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* Pandit N. S. I., p. 628.

into, or entirely through, the wall. All the courses, however, were not of the same thickness, nor the stones always of the same size,* and the result was a kind of work which in reference to Grecian buildings is denominated the "pseudoisodomum." This plan, however, was not followed in the construction of walls of extraordinary thickness. It would have occasioned a great waste of labour and material to have filled up piers seven to ten or fifteen feet thick with carefully dressed blocks of the same size throughout, and a different style was therefore deemed necessary. This was to build irregular horizontal courses with partially worked stones of various sizes, and to face them on both sides with isodomic walls of well-dressed flags. Occasionally unhewn masses were rudely piled together with no further adjustment than the insertion of small blocks in the interstices, in the true cyclopean style, but their sides were always faced with cut stones of a superior quality. It should be added, however, that I have not had many opportunities of examining masonry work of great thickness in a dilapidated state, to be able to say with certainty whether the cyclopean, or the irregular horizontal style was the most prevalent. The latter was met with in about half-a-dozen places, and the former only twice: they were in every instance covered with a layer of finely dressed stones, except of course in the foundations where such facings would have been thrown away.

Mortar.

In Orissa mortar seems never to have been used; the massiveness of the blocks, and the accuracy, with which they were cut and adjusted, rendered it unnecessary. Wooden wedges were also not used, or,

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* Sanskrit works on architecture insist on the ashlars being of uniform size, and the Agni Purána recommends squares of one cubit with a depth of 8 fingers as the most appropriate, bricks being of half that size; but the rule seems never to have been respected.

शिलाः प्रासादलिङ्गस्य पादधर्म्मादिसंज्ञकाः ।
अष्टाङ्गुलोच्छ्रिताः शस्ताश्चतुरस्राकरायताः ॥

if used, they are not now traceable. In the joining, however, of long projecting cornices and roof-stones, iron clamps were frequently employed. At Koṇárak I also noticed lead in the fissures and holes in the remains of cornices; but neither copper nor brass.* The iron has everywhere rusted and swollen, and produced serious cracks in the stones in which they are imbedded, causing thereby more injury to the temples, than time and climate have done in course of centuries. The Uriyá builders of old appear to have been, to some extent at least, aware of this source of danger, for iron clamps occur less frequently in the ancient temples of Bhuvanes'vara than in the more modern structures of Puri and Koṇárak.

From the absence of mortar it might be argued that the ancient Uriyás had either no knowledge of it, or had no material at hand to be so employed. Such was, however, not the case. *Ghuting* (nodular limestone conglomerate) abounds in almost every part of Orissa, and its ancient builders knew well the value of that article as a cement, and used it extensively for closing the joints on roofs, domes, &c., as also for plastering the interior of their houses and temples ; and abundant evidence of its employment may be everywhere seen. It entered largely also in the composition of their vases, and occasionally, but rarely, in the formation of architectural ornaments.

In other parts of India particularly where bricks were used, mortar of powdered bricks mixed with ghuting lime was extensively employed. In plastering walls the quantity of powdered bricks was greatly reduced so as to allow the lime to give a white colour to the plaster. In some cases lime made from lime-stone as also shell-lime was used for plastering and

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* Diodorus Siculus, speaking of the bridge which Semiramis built over the Euphrates, states, that the stones were held together by iron clamps, the interstices of which were filled up with molten lead. In ancient Egypt the same practice was common.

modelling ornaments. Ordinarily the ornaments were first made of the powdered brick mortar and then covered over with pure lime plaster and this is what is seen in the Nálandá temple in Behar.

Varáha mihira, in his Brihat Sañhitá, furnishes recipes for three kinds of cement which were used for stopping leaks and also for plastering, but looking to their composition I do not think they could have been used for plastering, however useful they may have been for the first-named purpose. They appear to be curious, and so I copy them here.

1, 2, 3. "Unripe ebony fruits, unripe wood-apples, blossoms of silk-cotton, seeds of Boswellia, bark of Dhanvan, and acorus; combined with these substances, boil a *droṇa* of water, and, when the mass has sunk to an eighth of the volume, take the sediment, which combine with the following substances: turpentine, myrrh, bdellium, marking-nut, resin of Boswellia and of Shorea, linseed, and Bilva-fruit. The paste, being mixed with these, is termed Diamond-plaster.

4. This plaster, calified, is to be applied on the roofs of temples and mansions, on Çiva-emblems, idols, walls and wells, to last for a thousand, a million of years.

5, 6. Lac, resin of Boswellia (or of Deodar), bdellium, Grhadhûma, wood-apple, Bilva-kernels, fruits of Uraria, of ebony, of Madana, seed of Bassia, madder, resin of Shorea, myrrh and myrobalan; from these is extracted a second sort of Diamond-plaster, having the same qualities with the former, and to be used for the same purposes.

7. Another plaster termed quasi-diamond is prepared from horn of cows, buffaloes, and goats, apes' hair, buffalo-hide, and cow-hide, combined with Azadiracht, wood-apple, and myrrh.

8. A mixture of eight portions of lead, two portions of bell-metal, and one portion of iron-rust is mentioned by Maya, and known by the name of Diamond-compound."*

* Journal, Rl. A. S., N. S., VI. pp. 321-22.

Iron Beams.

Owing to imperfect cohesion of its grains sandstone ill-adapted for architraves of large spa hence it is rarely employed for su purposes. Chlorite resists lateral pressure somewhat bett but it was scarce, and its great weight rendered it general unmanageable. Uriyá architects, therefore, resorted to ir beams, which they could forge with ease, and move abo with tolerable facility. The iron was probably obtained fro Tálchír, where it is smelted to this day, and was of exceller quality, well adapted for their purpose. At Bhuvanes'var such beams may be seen in great abundance. The hyper therions of the principal doorways are formed of bars fou inches square, and ten to twelve feet in length; the scantlin of architraves being 4×6 to 5 ×7 inches, with a length of 1 to 15 feet. Roofs, as already stated, were formed by horizon tal arches, but the projections from the opposite sides rarel closed in more than two-thirds of the space, the remainde was covered by flags of stone supported on iron beams. A Puri the beams are of larger dimensions; and at Koṇárak there is one, 21 feet long with an average thickness of 8×1c inches. Its material seems to be of a superior quality, and the forging throughout perfect. But the most remarkable feature in the piece of iron is its arched upper surface, the ends being 8 inches, and the centre 11 inches, an arrangement of parts by which the highest mechanical strength was secured without any unnecessary waste of material. This displays an amount of knowledge of the laws of force and resistance on the part of the engineers which is highly creditable to them.

Wood.

In a country so infested by white-ants as Orissa, it is not surprising that wood has been so little used in the construction of temples, though some of the finest woods of India, such as the teak and the sál, are so abundant everywhere. The only purpose for which wood was employed was, for the making of doors,

but, as most of the original doors have long since disappeared, and their places have been from time to time supplied by modern substitutes, it is impossible now to say how they were worked. The only ancient door now to be met with in Orissa occurs in the porch of the Great Tower of Bhuvanes'vara, and that is made of sandal-wood, divided into square panels, and carved in a diaper pattern somewhat like the patterns on the celebrated gates of Somanátha, now deposited in the fort at Agra. Mr. William Simpson, in a letter to the Editor of the *Daily News*, London newspaper, dated the 23rd December, 1871, doubts the gates to be those that were removed from the temple of Somanátha by Mahmúd Ghaznavi. He says, "I made a very careful sketch of them, including details of the ornament. As I sketched, it struck me as strange that the art contained nothing Hindu in its design. It was all purely Muhammadan. Out of the thirty two millions of Hindu gods, there was not one of them visible." He adds, "It was only on my return to England, and in conversation with Mr. Fergusson that I got confirmation of what I suspected. He agreed with me that the ornament was sufficient evidence that they could not possibly be the gates of Somanátha; but he added that the gates in the Diwánikhás at Agra had been inspected with a microscope, and they are of 'Deodar pine,' and not of sandal-wood. This fact, in spite of the proclamation" (of Lord Ellenborough) "would command a verdict against them from any jury."

The verdict however, it is to be supposed, would be to a great extent dependent on the nature of the jury, for were experts to be included in the panel they would not be able to join in the verdict so confidently expected upon the evidence adduced. The wood of the gate now at Agra has the colour, density (apparent), and grain of sandal-wood; but admitting, for the sake of argument, that it is really not so, there is nothing to show that deodar pine, the wood especially sacred to

the gods (from *deva* god and *dáru* wood), was inaccessible at Somanátha and that the report regarding the original gates having been of sandal-wood, founded on the evidence of Muhammadan writers, was not a mistaken one, resulting in the appearance of the wood. The character of the pattern (diaper) is simple enough, and the like of it may be seen in the Museum of the Asiatic Society of Bengal, engraved on the hafts of war-hatchets brought from the South Sea islands. It occurs likewise, slightly modified, on the panels of the Bhuvanes'vara temples, and it would require no ordinary amount of recklessness to say that the builders of Orissa in the seventh century and the South Sea Islanders got it from the Muhammadans. The prospect of finding some one or more of the thirty-three million gods of the Hindu pantheon carved on door-panels was so fanciful, that few natives of this country will feel at all surprised at its having so completely disappointed the writer. I must have visited at least five thousand temples in various parts of India, but I do not remember to have noticed any door-panel with figures of gods carved on it, certainly none in Orissa. It must be added, however, that there is nothing but their decayed ancient look to show that the Bhuvanes'vara doors are synchronous with the date of the Tower.

In Northern India, beams of wood are not uncommon in temples, and the oldest specimens I have seen occur on the top of the third storey room of the great temple at Buddha-Gayá.*

Season for building.

Some of the Puráṇas, as also the *Mánasára*, give detailed descriptions of various kinds of wood adapted for use in making dwellings, the seasons when the trees which yield them should be felled, their respective values for different purposes, the ceremonies to be observed when proceeding to fell trees for obtaining supplies of timber, the mode of seasoning them, &c. The former,

* My Buddha-Gayá, p. 85.

likewise, afford directions regarding the seasons and stellar conjunctions most favorable for commencing the building of temples and houses, and the ceremonies to be observed on such occasions. Thus the *Matsya Purána:* "The man who commences a building in the month of Chaitra, earns ill-health; he who does so in Vais'ákha gains wealth and jewels, but in Jyaistha, he encounters death. Should he begin it in the month of Áshádha, he will obtain slaves, jewels, cattle, and a good complexion. In S'rávaṇa, he will secure friends, and in Bhádra lose them, A house begun in Ás'vina brings on the death of one's wife, in Kártika, the gain of wealth and corn, in Márgas'írsha, abundance of food, and in Pausha, the fear of thieves. It is ordained that the month of Mágha ensures gain and learning, but it also brings on fire; while Phálguna gives offspring, and gold. Such are the effects of seasons."*

Of lunar constellations the following are described as the most appropriate, *viz.*, As'viní, Rohiní, Múla, Uttara Áshádha, Uttara Bhádrapada, Uttara Phalguní, Mriga-s'írsha, Svátí, Hastá, and Anurádhá."† Of the days of the week, Sundays and Tuesdays are injurious, the rest are appropriate.‡ Much weight is also laid on particular conjunctions, but as these

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* चैत्रे व्याधिमवाप्नोति यो गृहं कारयेन्नरः ।
वैशाखे धनरत्नानि ज्यैष्ठे मृत्युं तथैव च ॥
आषाढे भृत्यरत्नानि पशुवर्गमवाप्नुयात् ।
श्रावणे मित्रलाभं तु हानिं भाद्रपदे तथा ॥
पत्नीनाशं चाश्वयुगे कार्त्तिके धनधान्यकं ।
मार्गशीर्षे तथा भक्तं पौषे तस्करजं भयं ॥
लाभन्तु बहुशो विद्यादग्निं माघे विनिर्द्दिशेत् ।
काञ्चनं फाल्गुणे पुत्रानिति कालबलं स्मृतं ॥

Matsya Purána.

† अश्विनी रोहिणी मूलमुत्तरात्रयमैन्द्रवं ॥
स्वाती हस्तानुराधा च गृहारम्भे प्रशस्यते ।

Matsya Purána.

‡ आदित्यभौमवर्ज्जं च सर्व्वे वाराः शुभावहाः ॥

cannot be made intelligible to European readers without entering into tedious details, I shall not quote them here. The *Hayas'írsha Pancharátra*, a Tantra of the Vaishṇavite class, has also some rules on the subject; but they are scarcely worth noticing. According to it the rainy season is the most inappropriate, and no building should be commenced in it. The first ten days of the wane, the second five days of the waxing moon, the 4th, the 9th, and the 14th of both the wane and the waxing moon, are also said to be reprehensible.* It differs from the last authority, however, in rejecting only Sunday, and not also Tuesday, and approving of some of the Nakshatras which the former condemns.

Ground fit for building.

The Matsya Puráṇa affords detailed instructions for the selection and examination of the ground for building. Earth is divided by it into four classes according to its colour; the white is called Bráhmaṇa, it is said to have a sweet taste; the red is Kshatriya, and it produces an astringent taste in the mouth; the yellow is Vaisya, it is hot and astringent to the taste; and the black is S'údra; it is also astringent and hot. The merits of these different kinds of earth as substrata for buildings, or as materials for brick-making, are reckoned according to their caste, the Bráhmaṇa being the best, and the S'údra the worst.

Before commencing a building, the proper course is to dig a hole, measuring in every direction an *aratni*, or a cubit from the elbow to the end of the little finger. This being afterwards carefully plastered with mud, an unbaked saucer is to be filled with ghi, provided with four wicks on four sides, and placed on the bottom of the hole. The wicks being now lighted, if they burn uniformly and brightly, the ground is fit for building;

Matsya Puráṇa.

* वास्तुकर्म्म न चारभ्यं वर्षाकाले विजानता ।
कृष्णपक्षे त्रिभागान्ते शुक्लपादे द्वितीयके ॥
चतुर्थी नवमी वर्ज्ज्या तिथिश्चापि चतुर्द्दशी ।

otherwise it is bad. Another and more practical and intelligible nethod is to press into the hole the earth excavated from it ; f the earth should fill up the hole and leave a surplus, the ground is good ; if it should barely fill it up, but leave no surplus, the ground is indifferent ; but if it should prove insuffiient, the ground is positively bad.* The prevalence or abence of particular kinds of trees, and the readiness or otherwise with which seeds sprout when sown in the ground, are lso held as tests of its fitness for building upon.

Removal of bones.

After selecting the land great attention should be paid to remove whatever bones it may contain ; for bones, particularly those of Chanḍálas, are reckoned to be highly injurious to buildings. If no bones are found, and still there should be any suspicion of the presence of any such offensive matter, a ceremony has to be performed named *S'ailyoddhdra*, which is esteemed as highly effectual in neutralising the evil effects of bones under a build-

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* पूर्व्वं भूमिं परीक्षेत पश्चात् वास्तुं प्रकल्पयेत् ।
श्वेता रक्ता तथा पीता कृष्णा चैवानुपूर्व्वशः ॥
विप्रादेः शस्यते भूमिरतः कार्य्यं परीक्षणं ।
विप्राणां मधुरास्वादा कषाया क्षत्रियस्य च ॥
कषाये कटुता तद्वद्वैश्यशूद्रेषु शस्यते ।
अरत्निमात्रे वै गर्त्ते स्वनुलिप्ते च सर्व्वतः ॥
घृतमामशरावस्थं कृत्वा वर्त्तिचतुष्टयं ।
ज्वालयेद्भूपरीक्षार्थं पूर्णं तत् सर्व्वदिङ्मुखं ॥
दीप्ता पूर्व्वादि गृह्णीयाद्वर्णानामनुपूर्व्वशः ।
वास्तुः समृद्धिको नाम दीप्यते सर्व्वतस्तु यः ॥
शुभदः सर्व्ववर्णानां प्रासादेषु गृहेषु च ।
अरत्निमात्रकं गर्त्तं परीक्ष्य खातपूरणे ॥
अधिके श्रियमाप्नोति न्यूने हानिं समे समं ।
इति मात्स्ये ।

ing. Certain ceremonies have also to be performed before and after the completion of a building, of which an interesting account, by Bábu Pratápachandra Ghosha, will be found in the Journal of the Asiatic Society of Bengal for 1870, pp. 199, *et seq.* A summary of it here is scarcely needed.

# III.
# INDIAN SCULPTURE.

The influence of common humanity on art. General appearance. Relative proportions. Local peculiarities. Vegetable figures Animal figures. Human figures. Lubke's opinion. Reply thereto. Dædalean school. Æginetan school. Etruscan school. Egyptian school. Assyrian school. Orissan school. General character of Orissan school. Muscles Head. Forehead. Eyebrows. Eyes, chin lips and mouth. Nose and ears. Nationality. Pose. Group. Drapery. Relative proportions. Relief. Colour. Obscenity. Carving *in situ*. Libels against Indian art. Decoration. Respective symmetry. Uniform symmetry. Light and shade.

IN treating of sculptural representations of natural objects, it is necessary to bear in mind the common humanity of man in every part of the world. Even as poets dealing with the same subjects—the life and mind of man—produce similar images, whether tuning their lyre under the heat of the tropics, the genial climate of the temperate zone, or the biting cold of the north, so must artists, in their attempt to reproduce natural objects in stone, yield similar results; and as in the former case differences must arise from unequal capacity and local colouring, so must they result in the latter. Thus when a Válmíki and a Homer sing of the same subject, local similies aside, the result must be closely alike, without any interchange of ideas taking place between them; and similarly a Phidias of Greece and one of India, (had such a being ever existed) would have produced the beau-ideal of perfection in either country without borrowing from each other. Where the intellectual and artistic capacities are different, the results must necessarily be unequal; but the tendency everywhere must be to the same goal, and more or less similarity must be manifest according to circumstances, owing to the fact of the human

they have most admired, or some sciences which they have most applied; and" to give "all things else a tincture according to them, utterly untrue and improper." But for all that the fallacy exists, and to those who are above such influences, cannot but be striking. Sometimes, so thoroughly do our prepossessions become "bone of our bone and flesh of our flesh" that even the clearest reasoning does not prevent the student of science from combining the acceptance of a newly discovered fact with continued belief in a theory which that fact entirely disproves.

Relative proportions.

Relative proportions have generally been accepted as very good tests for determining the nationality of human figures. Seeing, however that, on the one hand, the human frame is in its general outline very much alike in all parts of the world, and that, on the other, no two masters of the Hellenic art adopted the same relative proportions, and further, that they are subject to extensive variations according to age, sex, and other causes, not to advert to the fact that specimens of ancient Indian art are generally of so primitive a character that they are not amenable to technical rules, it is hopeless to deduce from them any reliable evidence for a general premiss. There are certain peculiarities in proportion which if properly studied by experts,—such for instance as the breadth of the head along the eyes, which in Greece almost uniformly measured five eyes,—would doubtless be of value as collateral proofs, but they can under no circumstance be accepted as well-established majors for any universal conclusion.

Local peculiarity.

But while denying general appearance and relative proportions to be of much value as tests, I must admit that there are points in sculptures which must be accepted as conclusive. These refer to the representation of local peculiarities in art, and their value depends upon the amount of certainty with which

their local character is established. Thus, for instance, the disposition of the hair of the head, which differed greatly at different times among different nations, and which, whenever the styles and their ages are well-known, must at once determine the nationality of the figures on which they are found.

In the same way in well-finished statues the high cheek bones and other peculiarities of feature, as also drapery, may be accepted as good tests to that end. Posture or pose being generally dependant on the nature of action intended to be indicated, and human nature being everywhere alike and liable to produce the same or similar postures under similar circumstances, is not always a safe guide; still there are even in it peculiarities which when well-known may be depended upon.

But the most valuable tests are representations of local vegetation, local styles of ornament, local dress, and the like. These can leave no room for doubt, and when they do exist, and their local character is fully established, we may with perfect safety come to a positive conclusion.

Vegetable life.

The lotus, as may be expected from the circumstance of its being the most gorgeous and handsome flower in India, is by far the greatest favourite, and in Orissa, as elsewhere, occurs everywhere and in various forms,—in bud, in a half-open state, and in full blown flowers. In some specimens, the attempt to delineate nature is very nearly successsful, but a conventional form is what is generally adopted, in which single flowers of four, six, or eight petals are made to do duty for dense double blossoms. Pedestals of statues and footstools for goddesses are often formed of large multipetaled lotuses, but in such positions they are generally not so faithfully executed as in basso-rilievo scrolls, owing evidently to a want of proportion, their size and shape being regulated by the exi-

gencies of their situation, and not by the relation they bear to man in nature. On the whole, however, these lotuses, as well as all floral designs, are carved with great tact and elegance, and if sufficient allowance be made for the coarse material in which they are developed, the attempt of the Orissan artist to represent vegetable forms will be readily acknowledged to have been much more successful than that of Egyptian and Assyrian sculptors.

The superiority of marble over sandstone as a material for sculpture is overwhelming, and even very inferior carvings in it appear before the bulk of mankind with an amount of grace and beauty, which no other material can command. The most faithful cast in plaster of Paris of the Venus de Medici, or of the Apollo Belvedere, cannot for a moment produce the impression that the original does. That peculiar translucency of the surface of the finer kinds of marble, which invests all works carved in them with a characteristic charm, and completely cheats the eye of the beholder, is not possessed by any other material, and therefore, there is an initial disadvantage in comparing works done in sandstone with those made of marble. The superiority of marble, however, is due to nature and not to art; and in judging of artistic taste and capability, it would be but fair not to look to the material, but to the design and the manner in which sculptures are worked out; and if this canon be admitted, and the works of Uriyá artists be judged by their æsthetic design, their freedom and boldness of outline, and general execution, they will not suffer much by comparison with those of any other nation of their time or of antiquity.

"The Greek treatment of the acanthus and other vegetable forms may be," as noticed by Professor Lübke, "a model for all ages; and Roman art also has produced leaf-work which is thoroughly perfect in style,"* but, due allowance being made

* Lubke's History of Sculpture, I., p. 3.

for the difference of material, the differences between them and Uriyá art as manifested in the delineation of vegetable life, is not so overwhelmingly great as is apt to be supposed. Carefully judged, many points will offer in which a comparison may be held without discredit to the latter.

According to the author just quoted, "the representation of *vegetable life* is excluded from the sphere of sculpture." "Whenever consequently a vegetable creation is introduced into a work of" (Greek or Roman) "sculpture as an aid to the understanding of local and other relations, sculpture is obliged to give up all detailed delineation, and rather to produce a symbolic intimation than an imitation of actual reality."* The same, however, cannot be predicated of Orissan art. In it vegetable life forms just as much a subject of sculpture as any other object in nature, and, as a matter of fact, has been represented much more largely than animal, or human life. This peculiarity may be due to the amount of artistic talent necessary for carving vegetable forms being small, or to the fact of such forms sorting best with the genius and taste of the people; but this is certain, that the Uriyá artists depended very largely on the beauty of their vegetable forms for the success of their works, and introduced them as primary, and not as accessory, ornaments in their architecture much more extensively than any other nation of antiquity.

It is not to be denied that vegetable representations in stone must necessarily be to a certain extent wanting in "detailed delineation," and also to some, but not to the full, extent implied by the words, "rather symbolic intimations than imitations of actual reality." Circumstances render this unavoidable, and Uriyá works form no exception to the rule. There is, nevertheless, visible in the latter, a considerable amount of success in faithfully representing nature. It should also be ob-

† Loc. cit.

served that "ornament has," as justly and very pointedly put by Ruskin, "two entirely distinct sources of agreeableness: one, that of the abstract beauty of its forms; * * * the other, the sense of human labour and care spent upon it. How great this latter influence we may perhaps judge, by considering that there is not a cluster of weeds growing in any cranny of a ruin which has not a beauty in all respects *nearly* equal, and, in some, immeasurably superior, to that of the most elaborate sculpture of its stones: and that all our interest in the carved work, our sense of its richness, though it is tenfold less rich than the knots of grass beside it; of its delicacy, though it is a thousandfold less delicate; of its admirableness, though a millionfold less admirable; results from our consciousness of its being the works of poor, clumsy, toilsome man. Its true delightfulness depends on our discovering in it the record of thoughts, and intents, and trials, and heartbreakings—of recoveries and joyfulness of successs: all this can be traced by a practised eye; but, granting it even obscure, it is presumed or understood: and in that is the worth of the thing, just as much as of anything else we call precious."* This extraneous or adventitious value in Orissan floral ornament deserves especial mention. Combined with a considerable amount of faithful representation and integrity there is an amount of luxuriance of decoration, of picturesque arrangement, and of sumptuous display of successful human labour governed by thorough intellectuality that claims a high meed of praise.

Animal figures.

In the representation of vegetable life in sculpture the artist has only form and motion to study but no life, such life and freshness as are visible in vegetation after a summer shower, or the depression noticeable under a parching hot sun, belonging to the province of the painter, and not being attainable by the sculptor's art. The task of the artist, therefore, is easier when he carves

* The Seven Lamps of Architecture, p. 48.

foliage, flowers and trees than when he undertakes to reproduce the brute creation in stone. Then he has, besides form and motion, some ethereal, intangible, but at the same time most important elements, viz., sensuous passions to portray, and his undertaking becomes proportionately more arduous. But the Uriyás did not prove unequal to the task. They made considerable progress in it, and displayed much tact and ingenuity. In my work on Orissa reference has already been made to their life-like pictures of monkeys, and the success with which sensuous passions have been shown in them, (I.p. 47). The elephant has also been carved and chiseled with great skill. The horse at the southern gate of the Koṇárak porch is remarkably well proportioned, and representations of rats, parrots, geese, goslings, deer, and other animals shown in the illustrations annexed to my work on Orissa will, I imagine, be generally acknowledged to be pretty close imitations of nature. A colossal bull in the enclosure of the Great Tower is also worthy of note as a specimen of well-finished animal carving.

The lion among animals is, however, invariably ill-carved. It has everywhere a conventional, unnatural half-dog half-wolf look about it that is as unlike a real lion as it well can be. Its claws, mane and position, either erect or rampant, are also altogether unnatural. It is generally represented as trampling on an elephant about one half to one sixth of its size, crouching under its forelegs. Looking at groups like these, and the marked disparity in the size of the two animals, I am disposed to think that the lion had become extinct in Orissa when the sculptures were made, and the artists had to depend upon tradition and their imagination to produce its likeness. This inference receives some support from the fact of the lions in the Udayagiri bas-reliefs being much better shaped, and they, it is to be presumed, were delineated when the animal was common in the country. In central and western India lions

are still met with ,* but in Bengal they have long since become extinct, and the tradition is that, with the exception of a single animal, sacred to Bhagavatí, now living in the wilderness near Kámákhyá in Assam, there is no lion in existence in India. The Egyptians, as also the Assyrians, were superior to the Uriyás in this respect: their lions were not unoften carefully carved, displaying the mu. cles of their limbs to great advantage, and showing that when uncontrolled by religion the artists could imitate nature as successfully as their contemporaries. Some of their winged lions, however, are quite as bad as those of the Uriyás. Winged bulls and lions are unknown in Orissa.

Human figures.

Ascending from vegetable and animal to human life, we come to where the sculptor's art attains its highest perfection. It is then that it attempts "the representation of the divine and the heroic," and the infusion into it of "the spark of divine life, the conscious soul," and "a reflex of immortal beauty, idealizing lifeless handicraft." Then it is that it becomes "an animated spirit-breathing art," which, according to Socrates in his dialogue with the sculptor Clito,—"must represent the emotions of the soul by form." These predicates are, however, true only when applied to Grecian art in its perfection, and also to Roman art as a reflection of Grecian genius. No other ancient art made any near approach to that perfection. The Hindus were as far behind it as the Egyptians, Assyrians and Persians. The gulf between them and the Grecian artists of the golden age is wide and deep. The unique and inimitable perfection of the Phidian and the Praxitelian schools has hitherto been the great object of envy to artists of every age and clime, and it would be as idle to compare the works of the Uriyá sculp-

* In the Proceedings of the Asiatic Society of Bengal for 1868, p. 198, Dr. King adduces several instances of the true lion, not the maneless animal of Guzarat, having been recently shot by sportsmen in Gunáh, in Central India.

tors with the grand and the beautiful of the sacred land of art, as to compare the paintings of India with the *chef d'œuvre* of Raphael. The schools which preceded them were, however, neither so perfect, nor so far above the ordinary run of art in other ancient seats of civilization as to remove them from the sphere of comparison. The Etruscan, the Egyptian, and the Assyrian schools, have peculiarities which may be compared to advantage with those of Orissan sculpture to settle their relative merits. Doubtless they flourished long before the Orissan school, and a comparison between them cannot be fair to the ancient nations concerned; but as the object here is not to award the palm of superiority to any one nation, but to ascertain the position which should be assigned to the Uriyá artists in the history of art, it will, I think, not be held objectionable.

Orissan art compared with ancient European art.

The necessity for the comparison also arises from the circumstance of there existing a very erroneous impression on the subject in Europe, owing, doubtless, to a want of adequate information. Authors, who devote chapter after chapter, and not unoften entire works, to Egyptian and Assyrian art, refer perfunctorily, only as a matter of form, to Indian art, and simply to declare that it is unworthy of notice, or fit only to be condemned. The spirit in which the subject is generally taken up will be best illustrated by the following quotation from Mr. Westmacott's "Hand-book of Sculpture." After treating of the nature and character of Assyrian art, he says: "There is no temptation to dwell at length upon the sculpture of Hindustan. It affords no assistance in tracing the history of art, and its debased quality deprives it of all interest as a phase of fine art, the point of view from which it would here be considered. It must be admitted, however, that the works existing have sufficient character to stamp their nationality; and although they possess no properties that can make them

valuable as useful examples for the student, they offer very curious subjects of enquiry to the scholar and archæologist. The sculptures found in various parts of India, at Ellora, Elephanta, and other places, are of a strictly symbolical or mythological character. They usually consist of monstrous combinations of human and brute forms, repulsive from their ugliness and outrageous defiance of rule and even possibility."*

Lubke's opinion.

Dr. Wilhelm Lubke, in each of his two magnificent works, "the History of Art," and "the History of Sculpture," has devoted a few pages to India; but, like the author above noticed, only to come to the conclusion that the national religion of the people of this country could not favor the plastic art, and so they have none worthy of the name. After descanting on the effect of Hinduism and Buddhism on the mind of man, he says:

"In such a tendency of mind, the works of sculpture have suffered most. No religion ever brought to light such bombast of confused and mystical ideas as that of the Bráhmin. The character of the people inclines more than that of any other race to effeminate self-absorption and brooding speculation. Thoughtfulness degenerates at once into distorted ideas. The dreams of their wild imagination produced a mythology, the forms of which seem to ridicule all plastic representation. The divine beings are opposed to ordinary men by the unnatural number of their heads, arms, and legs. Thus the god *Rávaṇa is represented with ten heads and twenty arms; Brahmá* and Vishṇu with four; S'iva with four or five heads—the latter sometimes, indeed, with one head, but in that case it is furnished with three eyes. Occasionally Vishnu appears with a bear's or lion's head, and Ganes'a even with that of an elephant; and, lastly, there are three-headed figures, denoting nothing less than the Indian Trinity (Trimurti), Brahmá, S'iva, and Vishṇu.

* Westmacott's Hand-book of Sculpture, p. 50.

"The form, therefore, that would appear to us as a monster is by them regarded as a god. How low is the stage of consciousness which can recognize the divine only in that which is unnatural, distorted, and monstrous! and how should sculpture ever rise to higher forms when hand in hand with such a religion! Langlès, in his Monuments of Indian Art, gives the copy of a drawing by a Bráhmin, from the Imperial Library at Paris, which exhibits better than many words the unplastic spirit of these religious ideas. The subject is the birth of Brahmá. Vishṇu is represented as a woman, lying feebly on a lotus leaf. All round are to be seen small fishes, and among them a floating man. This is the expiator, Márkaṇḍeya, who swims about in the Milky Way to save the world from destruction. Vishṇu is naked, and is adorned with foolish ornaments; after the fashion of a child, he holds his left foot with its large toes, in his mouth. The many-headed, many-armed, and many-legged Brahmá is fastened to his umbilical cord. This one instance of the theological ideas of Brahminical dogmatism will suffice.

"It is almost exclusively subjects of mythology which engage Indian sculpture. A simple representation of actual life seems almost entirely lacking. How should art be inspired to delineate the circumstances of daily existence, when, according to the teaching of the Bráhmins, the world was only to be regarded as a dream of Brahmá's, or the production of Máyá (delusion), and when, moreover, by the assumption of an endless transmigration of souls, the value of each individual creature became illusory? Equally little can we look for the vigorous life of historical art on such a soil of mystical and speculative confusion. It is only exceptionally that we hear of such works, created as they are in a clearer and purer atmosphere. Yet we must not forbear here to point expressly to the scantiness and unreliable nature of our sources of information. Much as has been said of the splendour and

fabulous magnificence of Indian works, the value of most of these reports is but small in a critical point of view. We lack, moreover, satisfactory drawings, which might compensate for the deficiency of information. For this reason, therefore, any accurate appreciation or historical representation of Indian sculpture has been hitherto impossible. We must, in consequence, limit ourselves entirely to certain general remarks.

"We find the great mass of Indian sculpture as reliefs on the façades of their rock temples, or on the outside of the pagodas. These productions of an extravagantly luxuriant architecture are often completely covered with sculptures. Equally frequently are they introduced also in the interior, in niches and on capitals and cornices. The Brahmanical temples surpass in richness and fantastic wildness the Buddhist shrines, although at a later period Buddhism also could not resist the more splendid decoration of its monuments. The insulated statue, the highest and truest production of sculpture, is lacking to Indian art. Even the frequently colossal images of the seated Buddha, in the principal niche of Buddhist caves, are not statues but haut-reliefs. Deficient in freedom as she appears intellectually, Indian plastic art shows herself thus also outwardly, she is the slave of architecture to which she must be subservient in all its caprices; mistress and slave, alike devoid of all pure artistic intention, combined in mystical confusion wild, fantastic, and monstrous."*

Again, after commenting on what he describes as "the "ancient, fantastic, polytheistic belief of Bráhmaṇism, which by its spiritless formula, its mechanical hypocrisy, and depressing creed of an everlasting migration of souls, had corrupted to the utmost the national mind of the Hindu people," Professor Lubke observes: "The feeling of the people, however, did not create these sacred images from distinct conceptions, nor from

* History of Sculpture, I., p. 12.

pure human notions, but from dreamy fantastic ideas, and from mystical speculations. Art is here not merely the handmaid of religion, but the handmaid of a worship which finds approach to the idea of God in symbols of a monstrous kind. Wherever, therefore, the forms of the gods, or the history of their wonderful destiny, were to be portrayed, wherever deep and mysterious awe of the unapproachable was to be manifested, the accessories were only outwardly symbolic, and the vague attempt at effect is produced by heaps of wings, hands, arms and legs, or quaint combinations of animal and human bodies."*

The lack of information to which reference has been made in the above extracts will account for the many serious errors and misstatements, such as the absence of insulated statues and of simple representations of actual life, the relative dreaminess of Buddhism and Hinduism, &c., which disfigure them; and it is unnecessary to refute them in detail. But the general principle on which their main argument is based, is so obviously and so entirely fallacious, that I cannot help expressing my wonder, that a professor, historian, and art-critic of Dr. Lübke's standing and reputation, should have so readily adopted it.

It is undeniable that religion exercised a most potent influence in the development of the plastic art in the early states of human society; and it is not surprising, therefore, that there should be observable prominent marks of a close alliance having existed between it and sculpture in former times. Then religion and sculpture often went forth hand in hand, and the light of the one frequently fell on the other. The same may be said of the fine arts generally, for poetry, music and architecture, were as intimately connected with religion as sculpture. But they are nevertheless, by their origin and nature, as distinct and separate as the different intellectual faculties of

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* History of Art, I., p. 84.

nan can well be, and in their progress each of them has followed its course without being very materially controlled by ts allies. At any rate certain it is that plastic art attained its highest development, and called forth the greatest efforts of artistic genius, while living in close alliance with crass idolatry, and Christian Europe has hitherto failed to restore the lost hand of the "Laocoon" of idolatrous Rome. A far purer religion now prevails in Europe than was ever before known in Greece or Rome, and the conception of the nature of the Deity there among the different orders of the people, is certainly better than that of the Grecians, class for class. But plastic art, instead of gaining by alliance with a higher state of intellectuality and a purer and holier religion, has positively degenerated, and fallen back. It is futile, therefore, to take for granted that the grossness of the Hindu religion and its metaphysical dreaminess are the only causes, or the chief causes, of the low character of the Indian plastic art,—or rather to assume, as the professor has done, that Indian plastic art must be low, because the Hindu religion is bad.

It is nor for me to plead in favor of Indian mythology, nor am I its apologist; but very few intelligent persons will venture to maintain that Greek mythology was ever much superior to it. There exists a family likeness between the two which has induced several to attribute to them a common origin. If so, and the professor's major be right, it would follow that the influence of religion on the fine arts should be alike in India and Greece. Moreover, plastic and pictorial representations of mythological allegories must give rise to forms which are unnatural, distorted, and monstrous, and nations which look upon such mythology as sacred, do not hesitate to recognize the divine in such forms. It remains, however, to be shown that this recognition of divinity in forms which to Europeans of the present day appear monstrous, necessarily destroys, or overpowers, the æsthetic faculty, and

that those who do so, are, as a matter of course, incapable of appreciating the beautiful. No nation of ancient or modern times has evinced a higher sense of the beautiful in art than the Grecians. The beau-ideal of perfection in the human figure was conceived and developed by them, and them only, and yet the same Grecians recognized in Triton, the "upper part of whose body was human, and the lower part like that of a fish, with a tail turned in a lunar form," a god, and the son of their great god Neptune. They had also a god, Pan, "who had the body of a man, a red face with a flat nose, horns upon his head, and the legs, thighs, tail, and feet of a goat." Another of their gods, Typhóeus, son of Earth by Tartaros, was hundred-headed, and three sons of their great god Uranos, namely, Cottos, Briareós, and Gýés, had each a hundred hands (ἑκατόγχειρες). These were certainly more, monstrous than the elaphocephalous Ganes'a, the four-headed Brahmá, and the ten-handed Durgá of the Indian mythology. As to the four hands of Vishṇu, it would not be amiss to observe that æsthetically two pairs of hands for a single human figure are not more unnatural than a pair of hands and a pair of wings on the same figure, such as the Greeks and the Romans clapped on even their handsomest Cupids. Vishṇu with a lion's head has his counterpart in O'ceanos, who, according to Euripidés, was "bull-headed" (ταυρόκρανος). Then for Rávaṇa, whom Professor Lubke takes to be a god, but who is an avowed monster, and other Indian abnormal representations, the Grecians had their Sirens, who, whatever their original forms, were by their artists "furnished with the feathers, feet, wings, and tails of birds," and are so described by Apollónios (IV. 898);—their Gorgons, whom Æschylus calls the "three sisters of the Grææ, winged, serpent-fleeced, hateful to man, whom no one can look on and retain his breath; *i. e.*, live."—(Prom. 800 et seq.);—their Grææ, "the three long-lived maids, swan-formed, having one tooth and

one eye in common, on whom neither the sun with his beams nor the night-moon ever looks ;" (Op. cit.);—their Harpies, "odious, offensive monsters with female faces, and the bodies, wings, and claws of birds" ;—their Satyrs and Tatyrs and Centaurs. These are beings which certainly inspire no very lofty sense of the ideal of beauty in the issues of Greciae gods and supernatural beings ; but they at the same timu afford unmistakable evidences "of attempts to produce effect by the quaint combinations of animal and human bodies," which, in connexion with the Hindus, Professor Lubke so emphatically condemns.

Nor were these beings merely the *dramatis personæ* of myths and legends; most of them formed the subjects of plastic art among the Greeks, and their greatest artists, not only prepared them, but prized them most highly. It is said that Phryne, the Theban courtesan, after whom Praxiteles had chiseled two of his inimitable Venuses, wishing to possess the finest piece of work in the atelier of the great master, "sent one day a servant to Praxiteles to tell him that his workshop was in flames, and that his works were in danger of being destroyed. Praxiteles rushed out in the greatest alarm and anxiety, exclaiming that 'all was lost if his Satyr and Cupid were not saved.'"* The exclamation gave the shrewd woman an idea of what was the most valuable in the estimation of Praxiteles, and she took the Satyr for choice. This shows *that it was possible for the artist who* conceived and perfected the renowned Cnidian Venus and the handsomest Cupid, likewise to conceive and develope a Satyr, and, what is more, to hold the Satyr and the Cupid in equal estimation. It is evident also that the nation which believed in a gross polytheistical religion, and accepted Triton and Pan for divinities, could appreciate, and, by its appreciation, lead to the production of

* Westmacott's Hand-book of Sculpture, p. [illegible]

the finest works of art that human ingenuity has ever brought forth. The Romans, likewise, following an equally gross polytheistical religion, and, believing in the divinity of the two-headed Janus,* did produce works which continue to this day the models of perfection.

Looking to these facts, the only reasonable conclusion that can be arrived at is, that, however great the influence of religion on the plastic art, and great it certainly was at one time, it never was sufficient to destroy her separate existence, or even to control to any material extent her independent progress. When in alliance with religion, she served religion faithfully, by producing forms which it demanded, without any reference to taste, but she never lost her yearning to advance to perfection, and that irrespective, and even in defiance, of the checks, which religion tried to impose on her. The yearning was strong enough even in the very early times of the ancient Egyptians, who had to lay down rules to prevent the statues of gods from being carved in other than the old conventional self-same way which their forefathers had approved during the infancy of the art. The Hindus did the same; and yet the Egyptians and the Hindus failed to prevent the delineation of simple objects of nature and scenes of every-day life, so as to make the attempt at imitation more and more faithful, and quite different from what the rules insisted upon.

In the same way, when serving as a handmaid to poetry, plastic art, without forgetting her own true end, tried her best to give shape and form to poetical ideas and allegories, and did so without reference to the extent to

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* Janus Bifrons or Biceps. This divinity seems not to have been always satisfied with his two heads, for "it is said that at the taking of Falerii a statue was found with four faces; and at Rome there was a temple of Janus Quadrifrons,"—a veritable twin-brother of the Hindu Brahmá. See Keightley's Mythology of Greece and Italy, p. 463.

which she conformed to natural laws. Phidias, carving his celebrated figure of Minerva, thirty nine feet high, had to put on her hand a winged figure of victory, and this could be done by making a full grown and fully-dressed woman stand on the open palm of another, but the unnatural arrangement never deterred him from accomplishing the task he had undertaken. In later times, Michael Angelo was called upon, by the nature of his subject, to introduce a monster's head with the horns of a ram, at the bottom of his unrivalled work of art, the Last Judgment. In the creation of Eve in Wells Cathedral, there is a composition in which a human figure is shown leaning on a bench, and from his back projects the upper half of a female figure, *i.e.*, a monster with two heads, and two trunks supported on one pair of legs. The object of the artist, it is true, was only to represent a particular instant in the production of a natural being, but the resulting figure is abnormal for all that. Giovanni da Bologna had to reduce to shape the allegory of Mercury or rumour depending on human tongue, and he designed a lithe, agile, nude male figure with a cap and wings on his head, leaping out of "expanding rays (but very material and like a bundle of sticks) issuing from the puffed cheeks, or rather mouth, of a zephyr, whose head only is exhibited."† Again, Benvenuto Cellini, in his no less celebrated than magnificent group of Perseus and Andromeda, represents Perseus descending from mid-air to liberate the captive fair, and save her from the attack of a dragon issuing from flames, but, as travelling in mid-air, however natural to birds, is not quite consonant to human nature, the figure looks more like a man kicked down headlong from the top of a house than a hero descending for a fight with a monster. This offence against nature could not, however, be avoided. The story needed it, and the artist did what he could to preserve its substance.

* Westmacott's Hand-book of Sculpture, p. 307.

Similarly, when the Hindu artist had to give shape to the allegory of the birth of Brahmá, he designed, not a woman, as supposed by Dr. Lübke, but an *infant reclining* on a leafy couch to typify the perfection of *innocence* and *purity*, and made it suck its toe, as an emblem of supreme happiness, and it is questionable if there is any other object in nature which can symbolise those attributes with greater perfection than an infant so occupied. The ornaments on the infant may be "foolish" according to European notions regarding such things, but there exist such excessive differences of opinion and so much local prejudice even among Europeans regarding the propriety and beauty of particular personal ornaments, that a very good plea, I fancy, may be urged in their favour, founded on the spirit of the age when the sculpture was first designed, and on the attachment of the people of this country to ornaments. The issue of an umbilical cord from the navel of such an infant, and the presence of a human figure,* Brahmá, on the top of it, however unpoetical, are, on the whole, not quite so revolting as the Eve of Wells Cathedral.

Besides mythology and poetical allegory there are other causes which lead to monstrous, unnatural, or incongruous representations in paintings and sculpture: these are caprice, artistic conceit, and extravagance, very similar to what are so common amongst poets. They lead to the production of rams issuing from the volutes of Corinthian or composite pillars; of human figures whose nether halves are formed of undulating dockweeds,—compositions which first made their appearance on the frieze of Torre de Nerone, and long after got into fashion among the artists of the Renaissance;—of lions and bulls whose hind quarters are formed of the same weed; and of a variety of other unnatural forms,

* The multiplicity of hands and feet assigned by Dr. Lübke to Brahmá is not authorised by the allegory, and is probably due to a mistake.

some very pleasing, others grotesque and repulsive. But such vagaries, whether resulting from mythological, allegorical, poetical, or artistic causes, are mere accidents, and not the essentials of the plastic art, and their presence, therefore, does not afford sufficient *à priori* argument against the possibility of the Hindus attaining any great proficiency in sculpture. That they did not attain it is a fact not to be denied ; but the cause is to be looked for elsewhere than in their religion. What the cause was which led to this negative result I shall not venture to guess, seeing that European scholars have not yet been able satisfactorily to account for the positive superiority of the Greeks.*

Dædalian school.

The different ancient schools with which Orissian art may be compared are the Dædalian, the Æginetan the Etruscan, the Egyptian, and the Assyrian. They all show manifest marks of an early state of art—of an art which had risen above the rude imitation of primitive races—of mere ingenious carving,—and fully assumed its position as an art, but was still wanting the genius of a great master—of a Phidias—who could emancipate it from its archaic and hieratic fetters, and may, therefore, be fairly put in juxta-position with the Uriyá school, notwithstanding the fact of there being great differences in their ages. The general character of the school of Dædalus is well exemplified in "the self-same face, figure and action of Jupiter, Neptune, Hercules, and several heroic characters:" their "narrow eyes, their thin lips with the corners of the mouth turned upwards, their pointed chin, narrow loins, and turgid muscles,"† all bespeak a primitive age of art.

Æginetan school.

The works of the Æginetan age (B. C. 580-480) are somewhat in advance of the last; but "the heads are still either totally destitute of expres-

* Westmacott's Hand-book of Sculpture, p. 76.

† Westropp's Hand-book of Archæology. p. 126.

sion, or are all reduced to a general and conventional expression," and by "the oblique position of the eyes and mouth, they present that forced smile which seems to have been the characteristic feature common to all productions of the ancient style."* Adverting to this era Mr. Westmacott, in his remarks on the celebrated collection of statues discovered in 1812 on the island of Ægina, observes: "Here again the archaic element steps in in the character of the head, which exhibits all the peculiarities of the more ancient schools before referred to. However earnestly engaged, and even when wounded or dying, each warrior or hero has a smiling expression; the mouth being slightly open, as though the occupation of slaying and being slain was of the most pleasing and satisfactory nature."†

Professor Lübke's estimate of the merits of this school is very much the same. Talking of Greek art of the end of the 6th century, he says: "We find animals fighting, then a lion tearing a roe to pieces; then sphinxes and centaurs, human figures with fishes' bodies and other phantastic devices, side by side with scenes from actual life, such as men reclining at a social feast; and all in a heavy, stiff style, the figures strongly out of proportion and varying in size."‡

Etruscan school.

The first style of the Etruscan art was far inferior to that of Dædalus. "The rectilinear lines, the rigid attitude, the imperfect moulding of the features, the want of proportion in the limbs, and the oblique eyes which characterise it, and which received from the Romans the contemptuous name of 'opera Tuscanica,'" and the exaggerated forms of its second style, the very opposite of all that is graceful, easy, and flowing, place them in a low stage. The superiority of the later Etruscan, as of the Roman,

* Westropp's Hand-book of Archæology, p. 126.

† Handbook of Sculpture, p. 109.

‡ History of Sculpture, I, p. 82.

style is due to the influence of the Greek art of the golden age, and need not therefore be noticed in detail.

Egyptian school.

Egyptian art is by far the oldest; but by no means the most perfect. "Egyptian bas-relief," says Sir Gardner Wilkinson, "appears to have been, in its origin, a mere copy of painting, its predecessor. The first attempt to represent the figures of gods, sacred emblems, and other subjects, consisted in painting simple outlines of them on a flat surface, the details being afterwards put in with colour; but in process of time these forms were traced on stone with a tool, and the intermediate space between the various figures being afterwards cut away, the once level surface assumed the appearance of a bas-relief. It was, in fact, a pictorial representation on stone, which is evidently the character of all the bas-reliefs on Egyptian monuments; and which readily accounts for the imperfect arrangement of their figures.

"Deficient in conception, and above all, in a proper knowledge of grouping, they were unable to form those combinations which give true expression; every picture was made up of isolated parts put together according to some general notions, but without harmony or preconceived effect. The human face, the whole body, and everything they introduced were composed in the same manner, of separate members placed together one by one according to their relative situations: the eye, the nose, and other features, composed a face; but the expression of feelings and passions was entirely wanting; and the countenance of the king, whether charging an enemy's phalanx in the heat of battle, or peaceably offering incense in a sombre temple, presented the same outline and the same inanimate look. The peculiarity of the front view of an eye, introduced in a profile, is thus accounted for; it was the ordinary representation of that feature added to a profile, and no allowance was made for any change in the position of the head.

"It was the same with drapery: the figure was first drawn, and the drapery then added, not as a part of the whole but as an accessory; they had no general conception, no previous idea of the effect required to distinguish the warrior or the priest, beyond the impressions received from costume, or from the subject of which he formed a part; and the same figure was dressed according to the character it was intended to perform. Every portion of a picture was conceived by itself, and inserted as it was wanted to complete the scene; and when the walls of the building, where a subject was to be drawn, had been accurately ruled with squares, the figures were introduced and fitted to this mechanical arrangement. The members were appended to the body, and these squares regulated their form and distribution, in whatever posture they might be placed.

"Thus then, as Diodorus observes of Egyptian statues, various portions of the same figure might be made by several artists in different places, the style, and attitude having been previously agreed upon, which, when brought together, would necessarily agree and form a complete whole."*

This uniformity, rigidity, and absence of nature and life which characterise the bas-reliefs, may likewise be noticed in the statues of Egypt. Page after page may be turned of the whole series of the ponderous tomes† of the savans who accompanied Napoleon the Great in his Egyptian expedition, without encountering a single human figure which has any life, expression, or action—any dignity, grace, or ease—about it; or is other than a stiff, formal, rude imitation of nature. The cause of this may be partly due to the law

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* Wilkinson's Ancient Egyptians, III., pp. 264f.

† The writer regrets the necessity of depending here and elsewhere upon secondary evidence in the absence of personal knowledge of the originals. The evidence in the present instance, however, is generally acknowledged to be faithful.

referred to by Plato which forbade the artists to depart, in the slightest degree, in the execution of statues of the human form, from the type consecrated by priestly authority, but it implies likewise a primitive state of art, and want of appreciation of, or inability to develope, the beauty of nature in stone. True it is, as justly remarked by Plato, "that the pictures and statues made ten thousand years ago are in no one particular better or worse than what they now make."* The statues may be colossal in size, and vast in number, and, for the time when they were sculptured, highly creditable to the nation which made them; but they are neither natural nor beautful.

The sculptures of Assyria are superior to those of Egypt. They display much more life, energy and action. According to M. Beulé, "Ce don de saisir l'énergie de l'action et de caractériser la force physique est le principal mérite de la sculpture Ninivite ; elle constitute son originalité. Je ne sais trop si la race Assyrienne fournissait le modèle de ces corps si bien charpentés, aux formes athlétiques, aux muscles tendus comme des cordages ; je crois plutôt que les artistes avaient exagéré la nature et créé cette convention. De même que les artistes Égyptiens effacent les saillies sur la peau, font la tête, les membres, les extrémités grêles, et obtiennent un type idéal et presque immatériel ; de même les artistes Assyriens se plaisent à faire les corps trapus, les épaules larges, la tête forte, le cou puissant, les bras et les jambes conturés par la tension des veines et des *muscles*."† They are, however, as deficient in the true spirit of art as the sculptures of Egypt. The author quoted above thus sums up the defects of Assyrian art: "Ce qui prouve que, dans l'un et l'autre pays, on ètait arrivé à une convention absolue, c'est que les manœuvres, les prisonniers, les ennemis qui habitent sur les frontières les

Assyrian school.

* Plato, II Book of Laws.

† L'Art Assyrien, par M. Beulé; Journal des Savants, Juillet 1870, p. 422.

plus reculées, sont figurés avec la même forme, qui n'était plus qu'une sorte d'écriture signifiant l' *homme;* de même que toutes les têtes ont la même coiffure, la même barbe bouclée, le même nez, le même œil. Le costume et la richesse des ornements servent seuls à distinguer le roi du dernier de ses soldats. Quant aux eunuques, ils ont le maintien lisse et la chevelure des femmes avec des membres et des muscles virils."*

Orissan school.

In all these there are peculiarities which may be more or less predicated of Orissan art; but at the same time there are points of excellence in it which are not to be met with in the ancient schools named. The conventionality of form, which is so marked in them, prevails to some extent everywhere in India. It resulted from indolence, combined with a desire to imitate art instead of nature, under circumstances which were particularly favourable to such mannerism. Untouched by extraneous influences, art in Orissa successively rose, became stationary, and declined with the civilization of the people, very much in the same way which marked its course in Egypt and elsewhere; and its characteristics must to a certain extent be alike. The manner in which this conventionality takes the place of nature, has been most forcibly pointed out by Mr. Layard in his remarks on the decline of Assyrian art. "A certain proficiency," he says, "had been attained, and no violent changes took place to shake the established order of things, the artist, instead of endeavouring to imitate that which he saw in nature, received as correct delineations the works of his predecessors, and made them his types and his models. In some countries, as in Egypt, religion may have contributed to this result. Whilst the imagination, as well as the hand, was fettered by preju-

* L'Art Assyrien, par M. Beulé; Journal des Savants, Juillet 1870, p. 422.

dices, and even by law, or whilst indolence or ignorance led to the mere servile copying of what had been done before, it may easily be conceived how rapidly a deviation from correctness of form would take place. As each transmitted the errors of those who preceded him, and added to them himself, it is not wonderful, if, ere long, the whole became one great error. It is to be feared that this prescriptive love of imitation has excercised no less influence on modern art, than it did upon the arts of the ancients."*

Its general character.

The art of the Uriyás had its foundation on the canons of the S'ilpa S'ástra, which itself deduced them when Indian art had attained a certain pitch of excellence, for it conforms to them in all its main features; and thus taking a text-book instead of nature for its model, it had an uphill work to exceed the limit of excellence which that text assigned it. The S'ilpa S'ástra, however, dwelt on the forms, proportions, and features of gods, but it said nothing about ordinary human figures, and the artists had accordingly some liberty in dealing with the latter; but as gods are only the ideal types of men, the advantage was not considerable. Nevertheless, conventional forms are more frequent in the representations of gods than in those of mortals; and the statues of gods and goddesses in Orissa, though carved in finer stones and finished with greater care and labour, are less successful as works of art than figures of ordinary men. This is best shown in Illustrations Nos. 63 and 64 of my 'Antiquities of Orissa.' The first is taken from a colossal figure of Bhagavatí, "the mother of the universe," elaborately carved in black chlorite, and placed in one of the principal niches of the Great Tower of Bhuvanes'vara; and the second, a mere ornamental figure of a dancing girl, in a side niche of

* Nineveh, II, p. 282.

the Rájaráni Temple; and yet the mortal is far handsomer and more faithful to nature than the goddess. Illustrations Nos. 58, 59, and 60, also represent human figures, executed without much reliance on the rules of the S'ilpa S'ástra, which may be taken to be average examples of the condition which the art of sculpturing such subjects had attained in Orissa.

Generally speaking the forms of Orissan human figures are light and natural, and their action easy and lively. There is also manifest in them a knowledge of anatomy, a study of the organic contexture of the body, of the contour of its different members, a sense of the laws of gravity and motion operating on the body under different circumstances, and an excellence of imitation, carried to such a degree of truth as to give convincing proofs of an advanced step, and a higher stage in the development of art than are to be met with in Egypt or Assyria. The outlines, instead of being hard, stiff, and rectilinear, as in Egyptian, Assyrian, Etruscan, and Dædalean sculptures, are everywhere rounded, soft, graceful and in admirable repose. There is scarcely a single sharp angle, or a rigid straight line, in the whole composition to disturb its beauty; and the execution throughout, though deficient to a certain extent in chiseling and finish, is such as to give the palm of superiority to Orissa.

Even in small bas-reliefs, the easy grace of the king or the queen, the respectful attitude of the attendants, the versatility of the storyteller, and the gravity of the musician, are represented with considerable success. The bas-reliefs of Udayagiri, though coarser and very much decayed, are even more full of life, action, and energy, and display a considerable amount of artistic conception. The bas-reliefs of Sánchi and Amarávati are inferior to the last in this respect, but they are nevertheless superior to those of Egypt and Assyria. In some examples the poetical hyperboles of exceedingly slender waist and large hips, are attempted to be represented in stone

at a sad sacrifice of truth; but they are by no means the most finished samples of Uriyá art. The busts are generally more protuberant than in Europe, Egypt, and Assyria, and to some extent offensive to European taste; but this is probably due to a faithful representation of Orissan life, and not to a defect of art, or to a vitiated taste of the people reflected on the artists. The female breasts are generally much more developed in India than in higher latitudes; and in Orissa and Bengal they are particularly so, leading to early pendulosity to an extent unknown even in the North-Western Provinces. In the Punjab their size is generally not so large, nor does the declination commence until after the fortieth year, whereas in Bengal and Orissa it commences almost at the close of the teens, and the artist here, who would follow life, could not but produce something less beautiful than his brethren in Europe. This doubtless amounts to an admission that the artists failed to develop the ideal—to combine in one figure the finest points of beauty from a hundred living models—such as the Greeks did, and the Indian poet conceived in his Tilottamá; but the fact cannot be gainsaid.

Muscles.

A similar attempt to represent nature faithfully has resulted in another defect, which European artists cannot but complain of:*

* Professor Lubke thus comments on this subject: "The organic structure of the body, the articulation of the bones, and the network of muscles and sinews, disappear beneath the veil of soft voluptuousness. Everything indicating vigorous strength and energy, and determination of will, is utterly repressed; the figures are only qualified for a passive life of enjoyment, and for a vague dreaminess. They appear to us as devoid of free-will as the flower quivering on its stalk, or the leaf trembling in the breeze. Characteristically enough, Sakuntalá's arms are compared in poetry to supple stems. An insipid smile, indifferent and stereotyped, rests on the features of these figures." (*History of Sculpture I.*, p. 17). These remarks are made with especial reference to certain bas-reliefs of Ellora, but they are intended to be general, and to a certain extent are true, as admitted above. The cause assigned is, however, entirely wrong. The

Indian statues are sadly wanting in muscles. The appearance of firmness, vigour, and strength, which so prominently characterises Grecian male figures, is due, to a great extent, to the bulging, knotty and rigid muscles they represent. The deltoid, the biceps, the pectoral, the gastrocnemius, and other muscles are all chiseled to perfection, and they strike the beholder with a sense of great strength and heroic manliness. Assyrian figures are, also, as stated above, well executed in this respect; but in Orissa prominent muscles are but too frequently wanting. Even the statue of Kártikeya, the mighty God of War, in the Great Tower of Bhuvanes'vara, to the execution of whose ornaments and garlands and brocade dress the artist has devoted uncommon attention and labour, appears without a single muscle projecting from under his skin. The calves, arms, breasts, shoulders, in short the whole body, is rounded, soft and plump, like that of a woman. Kártikeya, however, is a youthful divinity, partaking more of the Apollo than of the Hercules of the Grecian artists, and his plumpness, therefore, is in keeping, with his myth. The nude male figures at Bhuvanes'vara, Puri, and Koṇárak are, likewise, all rounded, soft and plump, and in them is seen the portraiture of the Uriyá to perfection; for he, like the Bengali, never attains anything like a well-developed calf, or a swelling deltoid. Rigid, knotty muscles are rarely to be seen in ordinary people, and even in acrobats and professed wrestlers they are generally ill-shown. A big, stout man is

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of muscles and sinews is not the result of the incapacity of Indian art, nor of the dreamy nature of the Hindu religion, but of successful art faithfully representing the human form as modified by the Indian climate and oleagenous and vegetable diet. The sneer at the supple arms of Sakuntalá, is due to the ignorance of the appearance of a banana stem, and therefore calls for no remark. It may, nevertheless, be a matter of enquiry to many Indians if the "network of muscles and sinews" did, or did not, "disappear beneath the veil of soft voluptuousness" on the arms of the Venus de Medici?

always a fat man, never a muscular one; and in the vernacular of the country, the two are indicated by the same term. It is not to be expected, therefore, that muscular forms should be represented in a prominent manner in sculpture.

As justly observed by Dr. Lübke, "Art can only attain her highest aim in such epochs and among such nations as universally recognise the beauty of the human form, in which it is promoted by natural capacity and favourable conditions of climate, in which it is developed by uniform exercise; and in which, lastly, the perfection of mind and body is equally cultivated."* In Bengal and Orissa, all these conditions are wanting; the climate is not only not favourable to exercise and development, but it induces a habit of indolent, sluggish, passive state of life, in which one would rather see a dance while seated at ease than dance himself; and that dance is more liked which consists of a series of gentle posture making than that which is an exuberant display of energy, as in Europe. The food of the people, also, is not only ill-calculated to develop the muscles, but it is exactly what is most favourable to cover the body with a superfluous coating of fat. In the North-Western Provinces, the people are taller, handsomer, and of better physique generally, but milk, ghi, and butter, being very largely used, and the climate for many months in the year being unfavorable to hard out-door exercise, their muscles are usually covered by a coating of fatty matter, and they fail to produce that idea of strength which prominent muscles are calculated to do. Egyptian sculptures are, also, sadly deficient in this respect, and it may be a question as to how far the defect there is due to ethnic peculiarities. It should be added, however, that in the Orissan figures which are represented as undergoing violent exertion, or bearing heavy weights, as in the dwarf under the architrave, in Illustration No. 7, of my "Antiquities

* History of Sculpture, I., p. 4.

Orissa, the circumstance is indicated as much by appropriate attitudes and positions as by rigid and swelling muscles displayed in a high state of tension. This cannot at all be predicated of Egyptian art.

Head.

The form of the head in Orissa is generally oval, and the features are natural. According to the *Garuḍa Purâṇa*, the top of the cranium of a well-formed head should be rounded like an umbrella, a flat one bespeaking poverty, and one like the bottom of a pitcher, a worthless character;* and this rule is very closely followed by Indian artists. The crown is generally high, though owing to the top-knot and other ornaments on the head, it is impossible to measure exactly whether the height from the upper line of the forehead to the top of the crown would equal one-fourth of the face. The hair is soft and flowing, and always chiseled with great care. It is never curly, or shaped into rounded buttons, as on the heads of Buddhist statues and Assyrian sculptures. Of the various ways in which the hair is dressed, detailed descriptions will appear under the head of coiffure.

Forehead.

According to the authority quoted above, men with low foreheads are always prone to cruel acts, and fit only to be exterminated. Very high protuberant foreheads are equally condemned;† in women especially so. A woman, who has a high protuberant forehead and serrated teeth, is sure, says an old adage, to lose

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* छत्राकारैः शिरोभिस्तु नृपा निम्नशिराधनी ।
चिपिटैश्च पितुर्मृत्युर्गवाढ्याः परिमण्डलैः ॥
घटमूर्द्धा पापरुचिर्धनाद्यैः परिवर्ज्जितः इति गारुडे६६ अध्यायः ॥

† उन्नतैर्विपुलैः शङ्खैर्ललाटैर्विषमैस्तथा ।
निर्धना धनवन्तश्च अर्द्धेन्दुसदृशैर्नराः ॥
आचार्य्याः शुक्तिविशालैः शिरालैः पापकारिणः ।
उन्नताभिः शिराभिस्तु स्वस्तिकाभिर्धनेश्वराः ॥

her husband on the night of her wedding.* Nevertheless, the leaning is in favor of high foreheads. According to the *Garuda Purána*, a forehead of medium size, somewhat protuberant, and shaped like a half-moon, the upper arch being formed by the hair of the head and the lower by the eyebrows, is the most appropriate.† The *Sámudrika* is not satisfied with this, and expresses its liking for a good, broad, prominent forehead, condemning the narrow-headed to an early death.‡ In men of mature age a high broad forehead is generally preferred, and this is what is common in sculpture, both for men and women; and in ordinary Uriyá life, this is not unoften heightened by the hair being combed backward, so as to expose the roots of the frontal hair, *i. e.*, in the "Alexandrine style," which Plutarch characterises by the words, *ἀναστολὴν τῆς κόμης*, or "a pushing back of the hair." Neither the *tenui fronte* of Horace, which the old commentators explain to be "a narrow and small forehead which is usually commended in a beautiful form" § nor the "*frons brevis*" of Martial, has a place in any of the more finished statues of Orissa. The arching of the reflexed hair above the forehead helps to improve the oval form of the face; and the advantage of it may be perceived by comparing it

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निम्नैर्ललाटैर्वधार्हाः क्रूरकर्मरताश्च ये ।
संवृतैश्च ललाटैश्च कृपणा उन्नतैर्नृपाः ॥

* উচকপালী চিরুণদাঁতী ।
বিয়ের রাতে খাবে পতি ॥

† न पृथु बालेन्दुनिभे भ्रुवौ ललाटकं ।
शुभमर्द्धेन्दुसंस्थानमतुङ्गं स्यादलोमशं । इति गारुडे ६५ अध्यायः ॥

‡ विपुले च ललाटे च धनाढ्यो जायते महान् ।
अल्पे चापि ललाटे तु स्वल्पायुर्जायते नरः ।
उन्नतेन ललाटेन धनाढ्यो जायते नरः ।

§ Angusta et parva fronte, quod [illegible]. Winckelmann's History of *Ancient Art*, p. [illegible].

with heads, in which the hair is allowed to hang in front and cause the face to appear rounded.

Eyebrows.

Ordinarily no eyebrows are chiseled in the larger statues, but where they are shown, they are generally arched so as to represent a bow, and so drawn out as to appear from the front, co-extensive with the ears. They are also joined at the root of the nose, a point of beauty which, though praised by Theocritus, and attributed to Ulysses, Briseis, Augustus, Julia, daughter of Titus, and others, was never generally approved, and a Greek epigram takes it to be an indication of pride and bitterness of spirit. The *Vishṇu Puráṇa* condemns it sharply. The rule on the subject of eyebrows is thus laid down in the *Garuḍa Puráṇa:* eyebrows, "when high and thick, predicate a life of enjoyment; when uneven or shaped like the sacrificial sword *(Khánḍá)*, property; where long and unconnected with each other, affluence: good eyebrows are high and (arched) like the new moon."* And the *Sámudrika* copies it almost literally.

Eyes.

The shape and expression of the eyes constitute by far the most essential elements in the beauty of the human face, and much has been written by Sanskrit authors on the subject. According to the *Sámudrika*, "red eyes indicate affluence; feline eyes, anger; eyes like those of the cock, great capacity for work; like those of the deer, beauty; like those of cats and geese, vile character; like those of peacocks, mediocrity; like those of dogs, or of a tawny colour, a disposition to cruel acts; like those of oxen, uniform prosperity; and squint eyes, a

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* विशालोन्नता सुखिनिदरिद्रा विषमभ्रुवः ।
धनी दीर्घा संसक्तभ्रूर्बालेन्दुनतसुभ्रुवः ॥
आढ्यानिम्नाश्च खड्गभ्रूर्मध्याश्च विनतभ्रुवः । इति गारुड़े ६६ अध्यायः।

wicked intriguing disposition.* [illegible] of poetry, the "deer-eye" and the [illegible] Homer, are the most important; [illegible] bespeaking modesty and lovely [illegible] the gazelle so frequently the subject [illegible] Eastern poetry, is not attainable by [illegible] ox-eye is equally beyond her [illegible] compound term be taken as a [illegible] In sculpture the eye is generally [illegible] than living models would justify: and [illegible] almond, with the greater curvature [illegible] and the lower eyelid forming almost a straight line. [illegible] maidens and young women, the upper [illegible] gives an amorous, languishing look. [illegible] sculpture is not to indicate colour, [illegible] in large statues to indicate the [illegible]

* [illegible Devanagari verse]

† The epithet has puzzled the [illegible] it into "stag-eyed." Others, [illegible] into "large-eyed," [illegible] shaped," "good-looking," [illegible] the cow is [illegible] moon, "charged by Hera [illegible] The ordinarily-received meaning [illegible] gives a clue to its true signification. [illegible] which marked the person of [illegible] eyelash and eye of a cow," [illegible] translated by Mr. [illegible] This is exactly equal to the term [illegible] of Homer, gives as one of [illegible] goddess' eyes which Homer [illegible]

reliefs and metal figures, a circle is often drawn for the former and a dot for the latter, to indicate the light. The position of the eyes is longitudinal, never oblique, as in Egypt and archaic Grecian statues.* The interocular space is sometimes, but not always, less than the length of an eye, and the eye-brows are not in sufficient relief. Nowhere, however, is the gross error committed of giving a full eye to a profile face, an error so universal in Egypt. In bas-reliefs, the face assumes different positions, from a perfect profile to a full face, and the shape of the eye is regulated according to the position of the face, showing, in this respect, a much superior knowledge of art than what the Egyptian and Assyrian sculptors evinced.

Chin, lips and mouth.

The chin is never so pointed as in the Dædalian school of Greece, and the lips are never so thin and skinny. The opening of the mouth is small and in excellent keeping with the face. A forced smile in the female face is common; in one instance, that of a nude female in the Rájarání temple, standing with the left hand across the breast, and the right in front of the body, lower down, in the attitude of the Venus de Medici, the idea of modesty, which the classic artist so beautifully pourtrayed, has been entirely dissipated by this unbecoming simper. The classic artist, also, left to the imagination to find out the cause of the position of his figure, whereas the less poetic Uriyá has introduced a grinning boy at the foot of the statue to explain its meaning, and thereby given to the whole a most indecent expression. The statue is perfectly insulated, and, but for its standing on both feet resting flat on the ground, could have been taken for a copy of the Medicean goddess. General Cunningham met with a somewhat similar statue at Mathurá; but its right hand does not

*It should be noted, however, that a belief exists among the people of Bengal that the oblique eye is a peculiarity of the gods.

extend sufficiently low, and it has some drapery and a great deal of ornament on its person. The General describes it thus: "The most remarkable piece of sculpture is that of a female of rather more than half life-size. The figure is naked, save a girdle of beads round the waist, the same as is seen in the Bhilsá sculptures and Ajantá paintings. The attitude and the positions of the hands are similar to those of the famous statue of Venus of the Capitol. But in the Mathurá statue, the left hand is brought across the right breast, while the right hand holds up a small portion of drapery. The head is slightly inclined towards the right shoulder, and the hair is dressed in a new and peculiar manner, with long curls on each side of the face, which fall from a large circular ornament on the top of the head. The back of the figure is supported by a thick cluster of lotus stalks covered with buds and flowers, which are very gracefully arranged, and boldly executed. The plump face with its broad smile is the least satisfactory part of the work. Altogether, this statue is one of the best specimens of Indian art that I have met with. I presume that it represents a dancing girl."* This smile, however, is not universal; and in the more finished specimens of work there is a great deal of expression and adaptation of the face appropriate to the subject intended to be expressed. In this respect the Uriyá artists, again, excel the sculptors of Egypt and Assyria, as well as those of ancient Greece. "The selfsame face and expression, alike in mourning or in jubilee, in every condition of life, so that a king differs not in the least from the peasant at the plough," so characteristic of Egyptian sculpture, is far from being prevalent in Orissa, though to a certain, and on the whole a very small, extent, it has not been prevented in minor figures. There is also in them more energy,

* Archæological Survey of India, Report for 1862-63, I., p. 240.

more action, and altogether more life and feeling than are to be met with in the statues of Egypt.

Nose and ears.

In ancient Sanskrit poetry, the nose is usually compared with the flower of the sesamum, or the bill of the parrot, which would imply that the arched Roman nose, or a *nez aquilin*, was at the time reckoned the most beautiful; but in sculpture this is rarely met with. In the figures of gods and goddesses, the Hellenic nose running down in almost a straight line with the forehead, and forming a perfect Grecian profile, is the most common; but in human figures a slight depression at the root is ordinarily observable. In Egyptian figures the nose is always depressed. The ears are of the same size as the nose, and stand in a line with it.

Nationality.

The features are throughout Hindu of the Bengal type. There is nothing in any of the details, in the eyes, the nose, the cheek-bones, and the forehead,—those features where ethnic peculiarities are best indicated—to show a trace of aboriginal Tamilian characteristics; and this circumstance may be taken as a strong proof in favour of the Indo-Aryan origin of the works. Had the temples and their decorations proceeded from Dravidian artists, their character would have been entirely different. Even English painters of the present day, at least such as come to Calcutta, but too often give a European character to the native portraits they paint; and it is but natural to suppose that South Indian artists, had they been employed on the Orissan temples, would have given them a strong Tamilian cast.

Pose.

The most approved position for gods is standing on both legs, embodying the idea of firmness and dignity: for goddesses, the same, but resting on the left foot, the right leg crossing the left, and touching the ground by the ends of the toes. For Krishṇa

this feminine position is the most approved, with three bends in the body, *(tribhanga,)* the first caused by the crossing of the legs, the second by a curvature at the waist, and the third by an inclination of the head to one side, generally the left. This is esteemed the most amatory and graceful, and dancing girls are often represented with these, or similar, bends. The Greeks took this position to be indicative of frolicsome youth and effeminacy, and assigned it only to Apollo, Bacchus and Mercury, censuring it, like the Hindus, in grave subjects.* For the different manifestations of Durgá this style of *tribhanga* is not usually tolerated, the myths on which they are founded requiring vigorous action. Such is also the case with some forms of the fierce god Rudra; and the figures of that divinity are often represented in positions and attitudes expressive of violent agitation. When, however, S'iva appears in the company of his consort, the lady is placed on the lap of her husband, and the attitude adopted is one of easy grace and enjoyment. In the case of seated single figures of goddesses the usual position is that of squatting on a bench or chair, with one foot hanging down, or resting on a stool, or a lotus. Ordinary women of quality appear squatting with the legs crossed. This is, however, far from being a general rule, and the pose is regulated by the nature of the subject, and by the place where they are located. Standing on one or both legs; leaning forward, or backward, or to one side; dancing, running, leaping, sitting straight, or reclining on a pillow, are positions of common occurrence; but on the whole, vigorous manifestations of active energetic action are less frequent, and those of an idle enjoyment of life predominate. "In harmony with this, we find full swelling luxurious softness of forms, and easy carelessness of attitude."†

* Winkelmann's History of Ancient Art, p. 160.
† Lübke's History of Art, I., p. 86.

The nature of the Indian climate and its action on the mind and body of man to which references have already been made is sufficient to account for this, without any recourse to the dreaminess of Indian philosophy and religions to which European authors are so apt to refer everything Indian. The temper of nations, the outcome of the climate they live in, is a much more potent influence in such cases than religion, which itself is governed and moulded by it. It controls alike their aspirations in a future world as well as in this. The Valhalla of the Scandinavians, the Paradise of Muhammad, and the heaven of Indra of the Hindus, are all manifestations of climatic influences on the mind of man. And such influences are all-powerful on ordinary life and enjoyment. In northern climes, where active exertion is a *sine quâ non* of existence, wrestling, hunting, and fighting, games involving violent exertion, and scenes depicting warfare, are the most delightful. The highest effort of the poet is directed to war-songs, the noblest form of the dramatic art is tragic, and some of the finest specimens of the pictorial and plastic art exhibit the most stirring scenes of life. In India, on the other hand, the heat and enervating action of the climate for nine months in the year, render all exertion unpleasant, and life must, therefore, be more tranquil, and seasoned with easy enjoyment. Music and singing and chess constitute the means of amusement ; poetry sings of love ; and the drama prohibits the exhibition of tragic scenes on the stage. It is but natural, therefore, that art here should take an easy, soft, voluptuous tone, very different from that which is most gratifying in high latitudes. In the early states of Indian society, when the Aryans had not yet lost theirt rans-Himalyan energy and vigour, the heroic in art and literature readily recommended itself to them, but in the seventh century of the Christian era, on the sea-board of Orissa, the case was otherwise.

There is also a propriety in the proportion of the different figures of a group in Orissa which we look for in vain in Egypt. Except under peculiar circumstances, such as that of fitting in a narrow tall niche a group which requires more breadth than height, or in representations of attendants on gods, where the attention of the beholder has to be concentrated exclusively on the principal figure, the enormity is never committed, as in the land of the Pharaohs, of making the king many times larger than his attendants. The relation to each other of the different individuals of a group in close union, or in a long procession, or in a narrative scene,—*i. e.* of the individual to the community,—has been to a great extent borne in mind, and perspective is everywhere attempted to be preserved, though not always successsfully. Of four-footed furniture the hind legs are always shown, and receding lines and angles follow to a certain, though small, extent the laws of perspective.

Group.

In the delineation of drapery, Orissan artists have also displayed much greater proficiency than those of the ancient schools with whom I have hitherto compared them. The Egyptains were, as already shown, the most defective in this respect. Anything like a graceful fold is nowhere to be met with in their works. The most colossal figures of sovereigns and other great men, such as that of Asymandyas at Thebes, appear all but nude, having nothing more on their persons in the way of dress than a strip of cloth round the waist, reaching a little below the middle of the thigh. On many females of rank a line across the legs and another near the neck indicate the limit of the dress, but its texture is nowhere else visible, and the figures, to all intents and purposes, are naked. The tunics on soldiers are indicated by two oblique lines on the sides, but nothing like a fold appears anywhere. The sculptures of

Drapery.

Assyria are equally defective in this respect, though the ornamentation on their cloth is more carefully shown than in Egypt. The most ancient specimens of Greek art are in this respect no better. Taking, for instance, the sculptures in the temple at Assos, now in the Museum of the Louvre in Paris, or the Metope from Selinus, representing Perseus and Medusa, now in the Museum at Palermo, or the seated figure of Minerva found at Athens and preserved at the Acropolis, or the statues from Miletus, now in the British Museum, the drapery appears, in a rude symbolical style, without any attempt at imitation of natural folds. If the object of drapery be, "not fully to conceal the body, nor to disfigure its outline and structure, but to harmonise in its folds with the form and organization of the body, and with the grace of its movements, clinging to it and receiving from it its law, just as in music the instrumental accompaniment follows the melody which the human voice gives forth,"—in short, if it be intended as an adornment, and not a cloak, all the three nations named, *viz.*, the Egyptians, Assyrians, and the Greeks of the 6th century, B. C., failed to employ it in its true character. Orissan artists, on the other hand, worked differently, and took considerable pains in most of their more finished works to display the folds of dress with every regard to nature; and the success they attained in this branch of art was not small. The folds of the turban, the movement in the floating ends of the *chadar* or himation, the plaited fronts of the *dhuti, or konchá*, the folds of skirts of tunics and *jámá*, as also the wrinkling of cloth tied round the waist, and of sleeves, are all delineated with care, and bespeak an artistic knowledge and capacity in many respects superior to those of the ancient schools.

Relative proportions.

In the formation of the idols of gods the proportions laid down in the S'ilpa S'ástra seem to have been generally, but neither invari-

ably not very strictly observed. According to the Shastras the entire length of a figure from the crown to the heel should be divided into a hundred and one parts* and these are taken as the units of measure by which the proportions of the other parts of the composition should be regulated. The thigh according to this authority should measure two hands, or twice twelve parts in length. The knee-caps should be of the same size as the eyes, and the legs equal to the thigh. The foot should be as high as the knee-caps, and slightly arched. Its length from the heel to the end of the great toe should be sixteen instants. The arm of twenty-four instants is preferred the most appropriate. The elbow should measure two instants and the forearm eighteen fingers. The hand to the end of the middle finger should be ten instants. The face should include eleven parts, and the neck four parts to the point of the shoulder from the root of the arm to the [illegible] of the breast. The upper extremity should measure thirty-six fingers. Twenty instants for the chest from nipple to nipple is deemed appropriate; and fifteen for the width across the navel. The expanse of the hip should be thirty-seven instants, and of the waist above it, nineteen. The [illegible] should be [illegible] instants wide; the hip-joint ten and-a-half, and the top of the legs seven-and-a-half, its middle [illegible] which will be [illegible] for four instants; and its lower end three-and-a-half. [illegible] should be four-and-a-half fingers. The foot should measure eleven instants. The breadth of the foot should be five instants, but the part along the great toe should be four instants; the toe itself should be two instants [illegible]

* The term used is [illegible] being [illegible] measure of time in music, very much in the same way as [illegible] the word *minute* for a similar purpose, and [illegible] of the body by so many heads, parts, and minutes. [illegible] breadth of the thumb, is apparently employed as [illegible] prevent misapprehension I have, in the paraphrase given [illegible] finger: a literal translation is scarcely needed.

nail half an instant wide; the second toe should be as long as the first; the third, fourth, and fifth, should successively be three, two and-a-half, and two instants, respectively, or seven, six, and five barley-corns, and the nails halves thereof. The middle of the arm should be seven instants, as also the elbow. The mid-forearm should be four instants, and the wrist three instants. The expanse of the palm at the beginning should be six fingers, and its end five fingers, the length of the palm should be six fingers. The middle finger should, likewise, be six fingers long, and the two on its two sides five and-a-half fingers each. The thumb and the little finger should not exceed half the length of the middle finger. Six barley-corns, seven barley-corns and six barley-corns, should be the thicknesses of the thumb and the fingers, respectively."*

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* एवं क्रमेण भक्तानां तालमानं प्रवक्ष्यते ।
उष्णीषात्पादपर्य्यन्तं तालोत्तरशतांशकम् ॥
तत्समं भानुभागं स्यादूरुदीर्घं मुखद्वयम् ।
जानु कर्णसमं कुर्य्यात् जङ्घा च ऊरुतुल्यकम् ॥
पादं जानुसमोच्चं स्यादेवमुत्तुङ्गमर्पयेत् ।
अङ्गुष्ठात्पार्ष्णिपर्य्यन्तं तलं षोड़शमात्रकम् ॥
चतुर्विंशतिमात्रं स्याद्बाहुदीर्घं प्रशस्यते ।
कूर्परं च द्विमात्रं स्यात् प्रकोष्ठमष्टादशाङ्गुलम् ॥
मध्याङ्गुल्यग्रसीमान्तं तलं तु दशमात्रकम् ।
रुद्रांशं मुखतारं स्याद्गलतारं युगद्वयम् ॥
तत्समं बाहुमूलं स्यात् जानुविस्तारं तत्समम् ।
बाहुपर्य्यन्तं विस्तारं षट्त्रिंशाङ्गुलकं तथा ॥
कक्षयोरन्तरं विंशं तत्तन्मात्रं प्रशस्यते ॥
मध्ये * * * तारं च पञ्चदशाङ्गुलं भवेत् ॥
श्रोणीदेशे विशालं स्यात् त्रिसप्तकाङ्गुलं भवेत् ।
नवाधिक्यं दशाङ्गुल्यं कटिदेशविशालकम् ॥
ऊरुमूलविशालन्तु द्वादशाङ्गुलमिष्यते ।
ऊरुमूलविशालं तु सार्द्धपञ्चत्र्यङ्गुलं भवेत् ॥
जङ्घामूलविशालन्तु सार्द्धसप्ताङ्गुलं तथा ।
जङ्घामध्यं षडङ्गुल्यं विस्तारं तु युगाङ्गुलम् ॥

The measurement, may be thus tabulated—

| | Instants. | Decimals. |
|---|---|---|
| Total length, ... ... ... | 101 | 1·000 |
| Thigh, ... ... ... | 24 | 0·237 |
| Leg, ... ... ... | 24 | 0·237 |
| Foot, ... ... ... | 16 | 0·158 |
| Arm, ... ... ... | 24 | 0·237 |
| Elbow, ... ... ... | 2 | 0·019 |
| Forearm, ... ... ... | 18 | 0·178 |
| Hand, ... ... ... | 10 | 0·099 |
| Face, ... ... ... | 11 | 0·108 |
| Neck, ... . . ... | 4 | 0·039 |
| Shoulder, ... ... ... | 4 | 0·039 |
| Upper extremity, ... ... | 36 | 0·356 |
| Chest (width), ... ... | 20 | 0·198 |

नखकाग्रतलविस्तारं सन्धिपादाङ्घ्रिमात्रकम् ।
सार्द्धवेदाङ्गुलं पार्ष्णिविस्तारं परिकीर्त्तितम् ॥
षड्भागिकं च पञ्चांशं प्रपदेति स्मृतं बुधैः ।
तलायन्तारपराङ्गुल्य वेदांशञ्चाङ्गुष्ठदीर्घकम् ॥
द्विपलं तस्य विस्तारं तारार्द्धनखविस्तृतिः ।
तर्ज्जन्यङ्गुष्ठतत्तुल्यं दीर्घं विस्तारमंशकम् ।
त्र्यङ्गुल्यं सार्द्ध पञ्चांशं द्व्यङ्गुलं च क्रमेण वै ।
मध्यमादिकनिष्ठान्तं दीर्घमेवं प्रशस्यते ॥
विस्तारं सप्तपट्पञ्चयवमानमुदीरितम् ।
तदर्द्धं च तदर्द्धं च नखविस्तारमुच्यते ॥
बाहुमध्यविशालान्तं सप्तांशं कूर्परं तथा ।
वेदाङ्गुलं प्रकोष्ठं च मणिबन्धं त्रियङ्गुलम् ॥
षडंशं तलमूलं च तलायन्तारयुगाङ्गुलं ।
तलदीर्घं षडङ्गुल्यं शेषांशं मध्यमाङ्गुलम् ॥
सार्द्धसप्ताङ्गुलं दीर्घं तर्ज्जन्यनामिकोदयं ।
सार्द्धसप्ताङ्गुलं दीर्घं कनिष्ठाङ्गुष्ठयोस्तथा ॥
चांशकं षट्यवं सप्तसद्यवन्तु यथाक्रमम् ।
अङ्गुष्ठादिकनिष्ठान्तं विस्तारं परिकीर्त्तितम् ॥

मानसारे ६६ अध्याये ।

Asiatic Society's MS. N.59.

| | Instants. | Decimals. |
|---|---|---|
| Waist (ditto), ... ... | 15 | 0·148 |
| Hip, upper part (ditto), ... ... | 19 | 0·188 |
| Hip, lower part (ditto), ... ... | 21 | 0·207 |
| Hip, joint (ditto), ... ... | 10½ | 0·103 |
| Leg, breadth, ... ... | 7½ | 0·074 |
| Leg, middle, ... ... ... | 6 | 0·059 |
| Leg, lower end,... ... ... | 3½ | ·034 |
| Heel, ... ... ... | 4½ | ·044 |
| Foot, ... ... ... | 11 | 0·108 |
| Great toe from meta-tarsus, ... | 4 | 0·039 |
| Great toe, ... ... ... | 2 | 0·019 |
| Second toe, ... ... ... | 4 | 0·039 |
| Third toe, ... ... ... | 3 | 0·029 |
| Fourth toe, ... ... ... | 2½ | 0·024 |
| Fifth toe, ... ... ... | 2 | 0·019 |
| Arm, middle, ... ... ... | 7 | 0·068 |
| Elbow, ... ... ... | 7 | 0·068 |
| Forearm, middle, ... ... | 4 | 0·039 |
| Wrist, ... ... ... | 3 | 0·029 |
| Palm, breadth (beginning),... ... | 6 | 0·059 |
| Ditto, (end), ... ... ... | 5 | 0·049 |
| Ditto, length, ... ... ... | 6 | 0·059 |
| Middle finger, ... ... ... | 6 | 0·059 |
| Index finger, ... ... ... | 5½ | 0·054 |
| Ring finger, ... ... ... | 5½ | 0·054 |
| Little finger, ... ... ... | 3 | 0·029 |
| Thumb, ... ... ... | 3 | 0·029 |

The limits of the different members noticed not being given, the definitions of some of these measurements are not clear, but as far as they are intelligible, and definable, they show that the measures given are fair averages of the human body, except in the length of the arm which appears to be excessive, and this, I strongly suspect, is due to an error in the

MS. of the Mánasára—a very corrupt one—I have at hand to consult; as it does not correspond with the total length of the upper extremity subsequently given. It might, however, be the measure of the perfect upper extremity reaching as low as the knee, which, according to one of the occult sciences, ensures to its possessor universal sovereignty; the subsequent measure being ordinary. The palm of the hand, the thumb, and the index and the little fingers, are also made a little shorter than they should be. These rules regarding the arm and the finger are, however, except in the case of a few Buddhist statues, never strictly followed; and even as regards them, the adherence to the rules is far from being universal. A large copper statue found at Sultánganj, and now deposited in the Manchester Museum, is the most longimanous of its kind, but it has not its arms quite so long as described in the S'ilpa S'ástra.

| Its dimensions are— | Ft. | In. |
|---|---|---|
| From the top-knot on the crown of the head, along the back to the edge of the heel, ... | 7 | 3 |
| From ditto, along the front to the sole of the foot under the instep, ... ... ... | 7 | 6 |
| Round the head, ... ... ... | 2 | 0 |
| Top-knot, ... ... ... | 0 | 3 |
| From bottom of top-knot to forehead, ... | 0 | 2⅛ |
| Length of face from forehead to chin, ... | 0 | 10 |
| From chin down to waist, ... ... | 2 | 0 |
| From waist to sole of foot, ... ... | 4 | 0 |
| Round the breast, ... ... ... | 6 | 7 |
| Across the shoulders, ... ... ... | 2 | 4 |
| From shoulder-joint to elbow, ... ... | 1 | 6 |
| From elbow to wrist, ... ... ... | 1 | 0 |
| From wrist to end of middle finger, ... | 1 | 0 |
| Foot, from heel to end of second toe ... | 1 | 0½ |

The above measurements were taken with a common

tape without any reference to the principles followed by artists in the calculation of the relative *proportions of the* different parts of the human figure. They disclose, however, some curious facts; thus, omitting the top-knot formed of a collection of hair on the crown of the head, I find that the total length of the figure (7 feet) is to the head ($12\frac{1}{2}$ inches) as $6\frac{3}{4}\frac{9}{12}$ to 1, or in the language of artists, 6 heads, 3 parts, 9 minutes, instead of the usual standard of 8 to 1, and also considerably under that of the antique statues. In the Hercules, the Apollo, and the Laocoon, the length of the body varies from 7 heads, 2 parts, 3 minutes, to 7 heads, 3 parts, 7 minutes. The tallest statue known is that of Mirmillo, and it measures 8 heads. The length of the fathom, again, which, in Europe, is reckoned to be the same as the height, is in the statue fully one-third more. This is owing, no doubt, to the belief common in India that the simian peculiarity of the hands reaching down to the knees is an emblem of divinity and universal sovereignty. It is worthy of note, however, that in a table published by Dr. Emil Schlagintweit in his recent work on Tibetan Buddhism, the fathom of Bráhmans of Upper India is represented to be greater than the length of their body, and the Bhots have the same peculiarity in a greater degree. It is remarkable also that the latter make Buddhas and Bodhisattvas have shorter fathoms than their genii and dragsheds. The increase in the fathom is effected by an inordinate prolongation of the hands, leaving the arm and the forearm less than their natural proportions as compared to those of Indian Bráhmaṇs, of Bhots, and of Bhotanese idols; but somewhat longer than the European standard of 1 head, 2 parts, and 3 minutes to the arm, and 1 head, 1 part, and 2 minutes to the forearm. The foot, according to modern artists, should be one-sixth of the body, but in the statue this has been exceeded by a few minutes. The torso is slightly shorter than the Grecian standard. The artist

had evidently adopted the tall North Indian, and not the squat Bhot, for his model.'*

The proportions of Kártikeya in the Great Tower, are as follow:—

| | | Ft. | In. | Decimals. |
|---|---|---|---|---|
| Total length, | ... ... ... | 6 | 0 | 1·000 |
| From crown to navel, | ... ... | 2 | 4 | 0·388 |
| Ditto to pubes, ... | ... ... | 2 | 10 | 0·472 |
| From pubes to heel, | ... ... | 3 | 2 | 0·527 |
| From navel to heel, | ... ... | 3 | 2 | 0.611 |
| Leg, knee to heel, | ... ... | 1 | 8 | 0.277 |
| Foot, | ... ... ... | 0 | 11 | 0·152 |
| Knee to hip, *(trochanter)*, | ... ... | 1 | 8 | 0·277 |
| Face, | ... ... ... | 0 | 11 | 0·152 |
| Breast, shoulder to shoulder, | ... | 2 | 4 | 0 388 |
| Arm, | ... ... ... | 0 | 6 | 0·083 |
| Neck, | ... ... ... | 0 | 2½ | 0·034 |

Putting the rule of the Mánasara, and the proportions of the Sultánganj Buddha and of the Bhuvanes'vara Kártikeya by the side of a table published in Mr. Elim Schlagintweit's work on Buddhism, I have the following·—

| | Rule in Mánasára. | Kártikeya at Bhuvanes'vara | Buddha from Sultánganj | Brahmans of Upper India. | Bhots | Buddhas, Bodhi-Sattvas of Tibet. | Dragsheds, Genii, Lamas, of Tibet. |
|---|---|---|---|---|---|---|---|
| Total height, ....... ........ | 1·000 | 1 000 | 1 000 | 1 000 | 1 000 | 1,000 | 1,000 |
| Head, ...... ......... ...... | 0 108 | 0·152 | 0 119 | 0 145 | 0 149 | 0,106 | 0,160 |
| Periphery round the forehead, .. | .... | ... | 0·285 | 0 322 | 0 345 | 0,350 | 0,420 |
| Length of fathom, ............ | ... | .... | 1·342 | 1·025 | 1 069 | 1,080 | 1,117 |
| Do, Arm, ....... ...... | 0·237 | 0·250 | 0·214 | 0 433 | 0·451 | 0,449 | 0,430 |
| Do, Forearm, .. ....... | 0·178 | | 0 142 | 0 165 | 0,164 | 0,149 | 0,155 |
| Do, Hand, . . ......... | 0 118 | | 0·142 | 0 107 | 0,110 | 0,110 | 0,110 |
| Do, Foot, ....... ..... | 0·108 | 0 152 | 0·148 | 0·144 | 0,145 | 0,140 | 0,144 |

* Author's paper on the Bhuddhist Remains of Sultanganj in the Journal of the Asiatic Society of Bengal, XXX.

The disparities observable under the different heads of the above are so great that I cannot in any way reconcile them. It should be noticed, however, that even in classic art the disparities are also glaring. Bearing also in mind the caprice of nature and of artists, the changes which the human form undergoes from infancy to old age, and in different nationalities, climates, habits, and professions, as also the exigencies of art, it must be admitted that such measurements cannot be fixed by any ideal standard, nor can any deduction of material importance be drawn from them. This much, however, may be said, that the human figures appear generally to be well-proportioned; their hands and feet are small, the arms are in keeping with the body, and the lower limbs are divested of the great length so ungainly and peculiar to the aboriginal form. In several figures which I have measured, the feet are, all but exactly, one-sixth of the body, and the hand two-fifteenths. The feminine hands are generally very small, and the fingers light and taper. In some statues the second toe is somewhat longer than the great toe.

Relief.

The great bulk of the sculptures in Orissa are in low relief, showing from one-eighth to one-fourth of the round. Some are in high relief or alti-rilievi, representing more than three-fourths of the round attached to a back ground; while a few are entirely round. Most of the figures of gods are of the last description. On friezes the nature and exigencies of architecture do not admit of other than bassi-rilievi, the highest parts of the different figures being on one level; but in niches, both attached and isolated figures are arranged on different levels and heights, so as to secure such a distribution of light and shade as to produce some amount of aerial perspective. This trait bespeaks a considerable advance in the theory and practice of the plastic art, which the Egyptians and the Assyrians never reached. Among the Greeks, too,

says Dr. Lübke, "the relief is restricted to one uniform level, and to the representation of only two figures side by side."*

Colour.

In figures of gods and goddesses in Orissa, as well as in other parts of India, the eyes, eyebrows, and sometimes the lips, are the parts which are generally painted; the colour of the rest of the body being left to be represented by that of the material of which the figures are made. In metallic figures painting is also limited to the same extent, but in wooden statues the whole is very thickly painted, or gilt, so as entirely to cover the original material. To what extent this rule was followed in the setting off of ornamental sculpture, it is impossible now to determine. A basso-rilievo horseman in the Dancing Hall of the Great Tower at Bhuvanes'vara is painted all over, so are some figures in the Dancing Hall of the Puri Temple. But with those exceptions, there is nothing to show that the lavish profusion of sculptured ornaments which are to be met with in every part of Orissa, ever had any painting on them. I carefully examined every nook and cranny—the deepest recesses of niches—to find traces of pigments, but found none; and the surfaces of finished statues, whether placed indoors or on the outside, bear no mark of ever having been painted. It may be presumed, therefore that architectural and ornamental sculptures were not set off with paint. It should be added, however, that the bulk of those sculptures have been exposed to tropical rains for near twelve hundred years, and it is futile now to expect any trace of paint on them, even if they ever had any.

Obscenity.

In describing the merits of Orissan art I must not forget to notice the despicable taste which the artists have displayed by making some of their figures most disgustingly obscene. By this

* History of Sculpture, I., p. 3.

I do not refer to their nudity, for, as justly observed by professor Lübke, "the task of sculpture is to conceive *man* in his full natural beauty. Hence the nude figure in its strictest sense is required. The perfect harmony and beauty of the whole can only be displayed in the unclothed form." This canon has been more or less accepted by artists and men of taste in every age and clime, and the Uriyás have rather evinced a true sense of the proper sphere of sculpture by chiseling the nude, and not thereby given offence to good taste.* But they have added thereto certain licentious representations which do not admit of description. Their number is small, and they by no means enter into the general scheme of ornamentation of the temples; but there they are; and their existence cannot but offer a violent shock to all modern sense of propriety and decency.

I enquired of many learned paṇḍits at Puri, as to why such offensive figures had been allowed to desecrate the sanctuary of the Divinity; but they could tell me nothing worth hearing. In one instance obscenity in a temple has been accounted for on the supposition of its being expiatory. In a note on Kajraha with reference to Rashiduddín's mention of that town, Sir Henry Elliot states that "in the Prithviráj Ráyasá mention is made of a Bráhmaṇ woman, Hamavatí by name, who had committed a little *faux pas* with the moon in human shape, and, as a self-imposed punishment for her indiscretion, held a Bándá jág, a part of which ceremony consists in sculpturing indecent representations on the walls of temples, and holding up one's foibles to the disgust and ridicule of the world."† The story

* If of the two Venuses by Praxiteles, the originator and great master of the sensuous style of rich voluptuous beauty, the citizens of Oxus decided to take the draped figure, as the more modest of the two, the people of Cnidos refused to give up the nude one, the renowned Cnidian Venus, even to ransom their city from foreign conquerors.

† Muhammadan Historians, I., p.

occurs in the 1st Canto of the Benares MS. of Chand, and in Mr. Growse's translation of it,* mention is made of the Bhāṇḍava sacrifice, but without any allusion to indecent representations on temples, and I can nowhere find a description of the ceremony in any Sanskrit work. Possibly there may be some authority for it, and the obscenity on Hemavatí's temple at Khárjinpur or Kajraha might be accounted for on the supposition that she wished to expiate her fault by a disgustingly public confession.

But it is scarcely to be supposed that all the principal sculptured temples of Orissa owe their indecent ornaments to a like cause, and I am disposed to think that the explanation is more ingenious than true. It is much more probable that the indecent figures on the old Central Indian temples were due to the same cause which produced them in Orissa. What that cause was, it is difficult now to say with perfect certainty. A vitiated taste, aided by general prevalence of immorality, might at first sight appear to be the most likely one; but I cannot believe that libidinousness, however depraved, would ever think of selecting fanes dedicated to the worship of God, as the most appropriate for its manifestation; for it is worthy of remark that they occur almost exclusively on temples and their attached porches, and never on enclosing walls, gateways, and other non-religious structures. "Our ideas of propriety," according to Voltaire, "lead us to suppose that a ceremony" (like the worship of Priapus), "which appears to us so infamous, could only be invented by licentiousness; but it is impossible to believe that depravity of manners would ever have led among any people to the establishment of religious ceremonies. It is probable, on the contrary, that this custom was first introduced in times of simplicity,—that the first thought was to honor the deity in the symbol of life

* Journal, As. Soc. XXXVII., Pt. I., p. 121.

which it has given us; such a ceremony may have excited licentiousness among youths, and have appeared ridiculous to men of education in more refined, more corrupt, and more enlightened times," but it never has its origin in such feelings. Besides, vicious propensities have, in India, been everywhere and at all times most emphatically denounced, and there is no creed known in this country which does not condemn it as hateful. It is out of the question, therefore, to suppose that a general prevalence of vice would of itself, without the authority of priests and scriptures, suffice to lead to the defilement of holy temples.

A religious sanction for it must be sought, and this, I believe, occurs in the fact of most of the temples on which the offensive figures are shown being dedicated to the mystical adoration of the phallic emblem. From a very early period in the history of religion, the phallic element has held a prominent place in the mind of man. Most of the leading religions of the ancient world—the Egyptian, the Chaldean, the Assyrian, and the Mosaic—manifested it in some form or other; and in primitive unsophisticated states of society, when philosophical conceptions of the mystery of generation "had not yet given to the various parts and members of the human body, those names which constitute the special vocabulary of obscenity of the present day, many symbols and representations were not only held inoffensive, but sacred," and their presence on ancient monuments, therefore, cannot be a matter of surprise. According to Dulaure the symbolic figure carried in procession during the festival of Osiris and Isis, (I's'vara=S'iva, and his consort I's'á) was a representation of the phallus of the bull.* In the Old Testament, allusion is made to Jewish women manufacturing phalli of gold and of silver.† In an interesting memoir on the worship of S'iva in

* Dulaure's Histoire abregée de differens Cultes, II., 32.

† Ezekiel, xvi., 17. 24. and 25. According to the Vulgate; "*et edificasti tibi*

Europe in former times, Professor Holmboe cites an extract from an ancient history of King St. Olaf, who introduced Christianity in Norway, in which mention is made of a pagan family residing in the province of Nordland, "qui adorait le linga d'un cheval, qu'on avait tué, mais dont on avait conservé le veretrum. Les soirs cette pièce passait de main en main non seulement parmi les personnes de la famille, mais encore parmi les hôtes qui pussent être presents, chaqu'un récitait un verset en délivrant l'idole á un autre."* In one of the apartments of the great palace at Karnac, there are several figures representing "une offrande d'un heros Egyptien á la grande divinité de Thébes au Dieu regénérateur caractérisé par le membre viril en érection,"† and these are repeated in the interior of its great granite Propylon and other places. In obscenity they are scarcely inferior to the works of the Uriyá artists.

These and innumerable other instances which could be easily multiplied, were it worth while, suggest the conclusion that the public exhibition of the phallus in the early ages had nothing in it which partook of indecency. "All ideas connected with it were of a reverential kind. When Abraham, as mentioned in Genesis, in asking his servant to take a solemn oath, makes him lay his hand 'under his thigh,' it was that he requried, as a token of his sincerity, his placing his hand on the most revered part of his body; as, at the present day a man would place his hand on his heart in order to evince his sincerity. Jacob, when dying, makes his son Joseph perform

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lupanor, gab et fecesti tibi prostibulum in *cunctis* plateis; ad omne caput viæ ædificasti signum prostitutiones tuæ, et divisisti pedes (inguina) tuos omni transuenti." Again, (V. 31) "fabricanti lupanar tuum in capite omnis viæ—nec jocta es quasi maritrix fastidio angens pretium sed quasi amelier adultera quæ cujus verum suum inducit alienos."

* Journal As. Soc XXXVI., p. 182.

† Description de l' Egypte, Vol. III., Plates 36 and 47.

the same act. A similar custom is still retained among the Arabs. An Arab, in taking a solemn oath, will place his hand on his membrum virile in attestation of his sincerity."* Thousands upon thousands of Hindus—men, women, and children—visit the Orissan temples every year; they undertake long and tedious journeys in the most inclement of Indian seasons; undergo the greatest privations, to have a sight of them; and return home with the firmest conviction that they have by the pilgrimage freed themselves of all their sins, without even indulging in the merest shadow of an idea, that there is any thing improper or indecorous in all that they have seen. The whole to them is a mystery,—a mystery of ancient times hallowed by age and enveloped in everything that is pure and holy,—and none attempts to lift the veil, and pry into secrets, or their causes, which his ancestors for centuries left untouched. You may point out the offensive character of the representations before him, and create a cloud of anxiety and uneasiness in his mind, but it is only a passing cloud that soon melts away before the fervour of his faith.

Looking to these facts I am induced to believe that the offensive figures are due to a desire to typify a religious idea, and not to an inherent vicious taste in the artists;† or their employers. It was not "to incite, excite, or gratify the lower feelings of the public," "to lower art to unworthy purposes

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* Journal of Anthropology, No. I., July 1870, p. cxl.

† By this remark it is not at all my wish altogether to exonerate the artists from some pruriency of imagination. Few artists of note have been above it. Even the renowned Phidias succumbed to it when he carved nude females resting in a pronate position on supine youths on the throne of his glorious Olympian Jupiter—a work of art, which according to the Stoic Epictetus, "it was still considered a misfortune for any of his contemporaries to die without having seen." What the figures represented is not positively known. According to Pausanias, they were Sphinxes seizing Theban youths; others took them to be Hercules and Theseus fighting with Amazons; but whatever they might have been, they were certainly not in very decent positions.

by objectionable representations," but to symbolize a religious idea, that the offensive sculptures were carved; and this was done without any perception of their offensive character. This is the more apparent in the circumstance of all the other ornaments being chaste, and their disposition thoroughly artistic. Tendrils and young leaves, flowers and fruits, pretty birds and pet animals, young children and youthful maidens,—the most graceful objects in nature,—have everywhere been selected for ornamentation, and they have been so combined as to produce the most striking effects. They have been, perhaps, more profusely employed than the classic taste of the Grecians would have permitted; but the accumulations being harmonious are not displeasing, and the main object being magnificence, they could not well be avoided. It may be added also that no object has anywhere been represented which is not calculated to inspire a sense of beauty in the beholder. The Romans made a grave mistake in this respect by placing skulls of men and oxen with cross bones between their triglyphs as objects of beauty. Long association may have altogether deadened the repulsiveness of those objects to the European eye, but, as Ruskin pointedly observes, "we may keep a skull beside us as long as we please; we may overcome its repulsiveness; we may render ourselves capable of perceiving many qualities of beauty about its lines; we may contemplate it for years together if we will, it and nothing else; but we shall not get ourselves to think as well of it as of a child's fair face."* Nothing of the kind occurs in Orissan temples. Grotesque forms and unnatural combinations are not uncommon, but they are by no means more obtrusive than in Greek or Roman art, and if the religious element and its monstrous conceptions could be eliminated, ' would be little that would be disagreeable, or unr'

* Modern Painters, II., 30.

is worthy of remark also that at Bhuvanes'vara this religious element is not particularly prominent; and the bulk of the ornaments have been copied from nature, and arranged with considerable study and refinement of taste.

Carving *in situ*.

In carving the ornaments, the Orissan artists followed the Assyrian plan of working *in situ*, and not the Egyptian one of preparing the sculptures in their ateliers, and then fixing them in their proper places. The temples were first built with a casing of carefully dressed ashlars, the largest blocks being placed where large statues were to be carved, and the sculptures traced and cut after the buildings had been completed. This is evident from the number of tracings existing on temples which circumstances afterwards prevented the artists from cutting and finishing: this plan was also followed in the ornamentation of the Sárnáth Tower and the Bhilsá Tope. This doubtless must have entailed stupendous labour, but it minimised the risk of injury to finished works. Three lions on the shaft of the Koṇárak Temple measure eighteen feet in length each, and were originally placed at a height of over sixty feet above the level of the surrounding country. In rough block, each of them must have weighed over ninety tons, and when being lifted to their places they must have been subjected to an amount of rough usage, which could never have spared the integrity of any carved work. In the case of ornamental bands and small bas-reliefs, the risk of injury, it is true, was not great; but in the absence of cement, it was necessary for the sake of strength and solidity in the temples to adopt the course under notice. The rule, however, did not apply to the images of gods in the sanctuaries, and also to some of the more finished statues in niches, which were evidently first carved in the shops of the artists, and afterwards removed to the places designed for them.

Toreutic art.

Reference has been made above to the copper statue of Buddha found at Sultanganj.* It is the largest metal figure of ancient times that has come under observation in this country. In artistic execution it is in no way inferior to the ordinary run of stone statues of Buddha found at Behar, Sarnath and other places in Northern India, showing that the people at the time were as competent in carving in stone as in modelling and moulding. But the most remarkable circumstance in connexion with it is the evidence it affords of the capacity of the people in melting and casting copper in such large quantities as to produce figures seven feet four inches in height. So extraordinary and improbable did this circumstance appear to some of the European officers of the East Indian Railway Company, when the figure was discovered, that they took it to be of Birmingham manufacture, sent out to this country for sale. There is, however, no doubt now about its Indian and ancient origin. Other figures of copper have been found, and there is ample proof in the ancient copper weapons of war that that metal was largely worked by the people of former times. It must be added, however, that on the whole, copper was never very largely used in the fabrication of statuary, and bronze never, that alloy being held impure. Brass is more readily melted; it has a more attractive colour; it takes a finer polish; and is firmer, more malleable, less liable to rust, and more easily wrought than copper. It has therefore been generally preferred as a material for ornamental figures. In the formation of the statues of gods it is also very largely employed; but in such cases it is alloyed with small quantities of six other metals, viz., gold, silver, iron, tin, lead, and mercury, making, with the copper and zinc of brass, eight, which alloy is esteemed the purest and [illegible]

* Journal of the Asiatic Society of Bengal, [illegible]

Buddha; but it has no date on it. Probably it is from sixteen to eighteen hundred years old; and such as it is, it has no trace whatever in its composition of Greek art. None of the metal figures of gods and goddesses in ancient temples now extant, can confidently be said to of be a greater age than a thousand years: the great majority of them are about half that age; and their forms are strictly Indian.

Libels against Indian Art.

After what has been stated above it is not necessary here to notice at length the libels which have been published from time to time against Indian art. Muller sees art in India, "roaming about with inconstancy amid an abundance of forms, and if it almost by accident lights on the simple and grand, is incapable of using and carrying it out as an established and recurring form of art; so that it is difficult to get rid of the idea that the architectonic and plastic sense in India was only awakened by impulses and communications of various kinds from without (probably from the Greeks or Javans), and that a nourishment was presented to it, which, however, it could not rightly digest."* His translator, who describes "the enormous pantheon at Ellora, in the Ghaut Mountains, destined at the same time for the reception of a hundred thousand pilgrims," (!) notices in it "inverted acanthus capitals." Mr. Gwilt, comparing the essential differences between Indian and Egyptian architecture, quotes a passage from the *Encyclopédie methodique* which says: "In Egypt, the principal forms of the building and its parts preponderate, inasmuch as the hieroglyphics with which they are covered never interfere with the general forms, nor injure the effect of the whole; in India the principal form is lost in the ornaments which divide and decompose it. In Egypt, that which is essential predominates; in India you are lost in a multitude of accessories. In the Egyptian architect-

* Ancient Art and its Remains, p. 226.

surfaces to represent some other material than that of which they actually consist," or the employment of ornaments which are calculated to produce a false impression on the behol.; No deception of any such kind has been practised by architects of Orissan temples: all their structures what they are intended for; every member has its ashlar or moulding, its meaning; no terracotta supply the place of honest hard-wrought ing deceives the eye into the belief that wooden variegated marble; no mark of mockery beauty of truth.

Of "power," the third lamp, by which massi element of architectural effect is indicated, enough been said in a preceding page (p. 81). There does not exist in the massiveness of Orissan nakedness which removes the pyramids from the architecture as a fine art; but it is not the less The first impression that the sight of an Orissan duces is its extreme solidity. No part of its pears weak, or insecure, or liable to be easily injured. visible abode of the Sempiternal Divinity, it is express signed to typify, or symbolize, to man, the idea of defiant alike of time and of the tremendous elemental motions of the tropics. If its parts are subdivided, or diversified, it is not to subdue the spirit of power, but to per it with beauty; and I have no reason to suspect that Europeans, who have studied ancient Indian temples, will a moment be disposed to side with Mr. Gwilt, and take to be emblems of littleness. At any rate, in Indians spire feelings of unity, solidity, beauty, and grandeur, the reverse of what the critic named is inclined to think.

The fourth canon is "Beauty," or the disposition of tectural ornaments in the most effective way. Of this has already been said, and a few words more will foll

The fifth is "Life," or "the making of an edifice the exponent of living things and of the men who rear it,"—a living handiwork, bespeaking the immortal spark in the architect struggling "towards something unattained," and not the *caput mortuum* of a dead art. This yearning for advancement, to be really beneficial, should be controlled by "the Lamp of Obedience," and so it is found in Orissa. From the time of the Great Tower of Bhuvanes′vara, in the middle of the seventh century, to that of the Black Pagoda of Koṇárak in the beginning of the thirteenth, the laws of the S′ilpa S′ástra represented the Lamp of Obedience, while "the luxuriousness of perpetually varying fancy," producing endless forms of ornaments in every possible mode of combination, bore evidence to that of life. From the last-named date life ebbed rapidly, and in less than a century was entirely extinct.

Little need be said of Orissan temples as "Lamps of Memory"—*i. e.*, "as monuments of history, conservators of old ideas, and relics of the past."* Every detail on them is a living monument;—every figure—every flower—every scroll—records faithfully the feelings, desires and aspirations, the joys and the sorrows, the religion, the habits of life, and the social condition of a bygone age. They are not what Ruskin calls "the pitiful concretions of lime and clay which spring up in mildewed forwardness out of the kneaded fields about our capital—those thin, tottering, foundationless shells of splintered wood and imitated stone—those gloomy rows of formalised minuteness, alike without difference and without fellowship,"—but living emblems of eternity, hoaried by age, and hallowed by ten thousand associations,—pages of history in which the people of this country have read, and will read for centuries to come, lessons of a more endearing and stirring nature than can ever be acquired from the mist-encumbered folia of the bulkiest tomes. If they fail in any

* Samson on the Elements of Art Criticism, p. 337.

one point as "Lamps of Memory," it is as regards political history. They bear no representations of battles with foreign foemen, no files of prisoners led in chains to swell the pageant of a mighty conqueror, no lines of potent kings seated in regal state, no varied groups of various nationalities to indicate the different races of men with which the kings of the country came in contact, such as endow the bas-reliefs and paintings of Egypt and Persia with engrossing interest. But it should be borne in mind that the structures on which such political representations appear are palaces and tombs, *i. e.*, to use the terminology of Ruskin, "civil" and "memorial" edifices, and there they are most appropriate and becoming; whereas those which form the subjects of this work are "devotional," earthly abodes raised by weak man for the habitation of the visible emblem of Him who is without beginning and without end, before which all men are equal, and the vanity and pomp of potentates melt into insignificance. Before them the sovereigns of Orissa assumed the humble title of "sweepers," and they could not venture to portray on such holy structures their own achievements and glory as sovereigns. Had their palaces been in existence, they would probably have shown some political bas-reliefs, but they have long since been swept away by the tide of time and the inundations of political vandalism.

Decoration.

The "Lamp of Beauty" includes location, size, decoration, symmetry, and the disposition of light and shade. On each of these heads some remarks have already been made in different parts of the preceding pages I desire, however, to add a few words regarding the last three. The excellence of decoration depends on the choice of forms, and their disposition in harmonious union. The two conditions have to be equally respected, or the object is defeated. It would be a trite axiom to say, that unless the forms themselves be bea..

combination can make them so; but it is equally true that even the most beautiful objects lose their effect if not appropriately arranged. The Orissans of the seventh century paid particular attention to both these conditions. They were, as already stated (p. 149), very choice in the selection of only what are naturally beautiful for ornaments, and they tried their utmost to arrange them to the best advantage. If their attempt at arrangement has not proved quite so successful as could be wished, it is due as much to art in India not having attained to that pitch of excellence with which European critics are too apt to compare it, as to national habits and local prejudices; for it must be borne in mind that, what is reckoned a most happy disposition according to one nation, does often appear incongruous and offensive to another. An apt illustration of this remark occurs in the "Seven Lamps of Architecture." Adverting to the disposition of garlands, Mr. Ruskin observes: "A garland is meant to be seen upon a head. There it is beautiful, because we suppose it is newly gathered and joyfully worn. But it is not meant to be hung on a wall." * This may be true of England, and perhaps also of modern Europe generally; but in India, where the universal practice is to wear garlands round the neck and not round the head, such a canon of taste cannot but be laughed at as absurd and ridiculous. It is usual here also to decorate houses, on festive occasions, with chaplets of leaves and flowers hung all over the walls, and accordingly Indian artists have everywhere ornamented the necks of pillars, and the surfaces of walls with carved ornaments of the kind, and the effect, instead of being incongruous and offensive, is positively beautiful. The festoons on the Corinthian frieze are also most agreeable and pleasing. Ideas of caricature and grotesque also differ in different

* Seven Lamps of Architecture, p. 105.

nationalities, and when they are brought to bear on ornamentation, diversities are produced, which, though not universally appreciable, are still not on that ground faulty. In such cases all that can be demanded is harmony, and this, I venture to think, is not wanting in Orissan temples.

Symmetry may be treated under three different heads: *1st.—Proportion*, or the adaptation of the dimensions of the several parts of a thing to each other. *2nd.—Respective Symmetry*, or such disposition of parts as to make the opposite sides equal to each other. *3rd.—Uniform Symmetry*, or that disposition of parts in which the same ordonnance reigns throughout the whole.

Respective Symmetry.

Regarding the first, some remarks have already been made at the beginning of the second article. The second, at first sight, may appear to be an unnatural formality, and therefore not an essential element of beauty. Nature does not arrange a landscape by two exactly similar halves, producing the same thing twice over; why should then man do so in building a house? The argument, however, is fallacious. In a beautiful landscape there *is* a balancing of its different parts so as to secure a considerable amount of symmetry, and artists study it carefully in grouping their subjects on canvas. A landscape, however, is not a single entity, but a collection of many objects; and for the purposes of comparison with a house or other art creation, it is necessary that individual objects of nature should be selected, and not collections. If this be done it will be found that nature is particularly mindful of respective symmetry in the formation of animated beings. With the exception of some of the lowest forms of organization, every animal is externally a compound of two symmetrical halves. Those halves may be so artfully united at the mesian line as to produce one individual, whose double character does not become manifest until after careful study, still the [illegible] character is nowhere wanting; and what is more, the [illegible]

of the form is in a great measure dependent upon it. Take away an eye or an arm from the finest figure, and its beauty is at once destroyed; even the alteration by a hair's breadth of one side of the most exquisitely-shaped mouth will induce an amount of deformity not easy to be defined. And what is true as regards the human form, is equally so in works of art, for imitation of nature forms the cardinal principle of beauty in art, and she advances towards perfection the more closely she copies nature. To quote William Hazlitt: "the highest art is the imitation of the finest nature, or, in other words, of that which conveys the strongest sense of pleasure or power, of the sublime or beautiful."*

Doubtless in architecture, where the proportions are large, very slight differences are not so easily perceptible as in small objects, but the principle is not thereby in the least affected. In Greek architecture this attempt to copy nature by adhering closely to the laws of respective symmetry is most prominent. All its nobler specimens, if cut longitudinally along the middle from their fronts, would invariably produce two exactly similar halves. The same is the case in Orissa, and there is not a single exception. The front is a combination of two halves reduced to unity by the intervention of the door and the coat of arms, or the dripstone moulding, over it, even as the human form is united by the nose and the mouth; and the two sides are exact counterparts of each other. The sameness induced by this arrangement is never obtrusive nor offensive, as the two sides can never be seen in the same light at the same instant. Stand where the observer will, he can behold only one of two sides, or one full side and small portions of two other sides, together scarcely equal to two full sides, and these in such different lights, that they never produce two identically same pictures, while the sense of

* Criticisms on Art, p. 257.

beauty produced by them is infinitely greater than any diversity in the forms of the sides could possibly produce. Indeed, if one were to conceive in his mind a peripteral temple with the columns of its left side different from those of its right, and feel the æsthetic effect of the arrangement, he will find no difficulty in appreciating the beauty of form which results from the similitude of the two sides of a house. This symmetry has been marred in many Orissan temples by subsequent additions, even as in ancient Greek edifices, but the original conception of the building nowhere tolerated any departure from perfect symmetry.

Uniform Symmetry.

Another principle of art in which repetition of the same forms and ornaments, instead of marring, or cloying, the sense of beauty, enhances it, is *uniform symmetry*, or that disposition of parts *in which the same ordonnance reigns throughout the whole.* Whatever the number of columns required in a building, it must be made up of structures of the same size and shape, and they must be arranged in the same style, and at uniform distances, with almost mathematical precision ; no deviation being anywhere permitted, and the smallest change being reckoned prejudical to beauty and taste. This is the fundamental law on which orders in architecture are founded, and it was most rigorously enforced by the Greeks. Indeed, the relative proportions of the several members of each Greek order are such, that it is impossible to mix any important member of one order with that of another without causing a frightful amount of deformity. In the absence of information regarding the different orders of architecture which prevailed in India in ancient times, and it being even questionable whether there were more than one order current, it is impossible to say how far there were restrictions in the way of employing ornaments promiscuously ; but as regards particular classes of buildings the rule of uniform symmetry was strictly observed

The roof appropriate to a porch was never put on a dancing hall, nor the mural decorations of the latter ever transferred to the former. The system of projections so peculiar to the square chamber of the temple and its porch could not be assimilated to the light, open, oblong dancing hall without altering its character, nor could the refectory be placed in immediate proximity to the temple to serve the purposes of a porch without destroying the symmetry of both. In short, each class of building has its peculiar character, peculiar disposition, and peculiar ornaments, and these have been assigned to their respective uses with scrupulous care. Further, when out of a number of various decorations, a particular one has been selected, such as the typical pilaster with ophidian mermaids, it has been repeated as often as necessary, but never coupled with another of a different style. There are instances in which a whole façade is not made up of the same kind of pilaster throughout, but of two or more kinds; but in such cases the grouping is peculiarly ingenious and artistic, and by the repetition of the same arrangement on the opposite sides, respective symmetry and harmony have been very happily preserved. All this is doubtless entirely arbitrary and fictitious; but, as justly observed by DeQuincy, "in every art there must be, with respect to truth, some fiction, and with respect to resemblance, something incomplete,"* and in regard to such a technical art as architecture, the mere fact of such rules having been laid down, and imperatively enforced, implies a highly advanced intellectual condition of the architects.

Light and Shade.

Casual references have already been made to the plan adopted by Orissan artists of diversifying their walls by frequent projections, with bevelled corners, and repeated chamfering, or splaying, and

* An Essay on the Nature, the End, and the Means of imitation in the Fine Arts, p. 113.

other devices, so as to produce varied contrasts of light and shade, and thereby secure the highest amount of picturesque effect compatible with a monochrome ground. This is a characteristic which, I believe, is peculiar to this country. The Grecians effected this object by their magnificent columns, placed on high terraces, so as to set the whole structure in bold relief against their clear blue sky. The Romans attempted to secure it by introducing engaged pillars, which, however, though effectual in covering the nakedness of flat walls, were not sufficient to cast such strong shadows as to secure much relief. The Saracens failed completely in this respect. Their walls are the repositories of panelings innumerable, but nothing high enough to cast a strong shadow.

In Orissa, on the other hand, the elevations and depressions of the surface are so bold and varied, that there are marked differences of light and shade, and yet they are so artistically and harmoniously united as to produce the most charming effect. On the surfaces of the walls the elevations are produced by buttress-like projections, with chamfered corners, and the depressions by niches; on pillars and pilasters by contractions and bands, supplemented by chamfering and other devices; and on mouldings and ornaments, by an intricate system of stops, scooping, and carving, which changes the light into a variety of shades. On rounded forms a line-of-beauty-like sigmoid scroll is a common device. It is sometimes carved into foliage, but ordinarily left bare. Its effect is very pleasing. It cuts the figure into two, and, by casting a strong dark line of shadow, brings out its contour to perfection. On flat bands and mouldings oblong tablets are frequently used, which break their continuity, and effect an agreeable diversion.

But the most generally adopted device is the *Rámarekhá*. Its use as a crest, though extensive, is secondary, compared to the part it plays in regulating the fall of

on mouldings, bands and fascias. Mr. H. H. Locke, of the Government School of Art, Calcutta, speaks in terms of great praise of this class of stops; and as he has made a more thorough and scientific study of Orissan architecture than any other European artist or antiquarian, and can, from his perfect familiarity with, and professional knowledge of, European art, speak on the subject with much authority, I avail myself of his permission to quote here a passage from a private letter of his to my address. He says: "These points are so many *stops* in the line of light and shade; sometimes the pause is that of a light point amid shadow, sometimes it is a dark point upon a belt of light; in both these phases the feature is extremely characteristic of the architecture you are writing about, and shews clearly how well the Orissan builders understood the value of a sharp line of cast-shadow across a varied surface. Place a rod in front of a long suit of mouldings and see how the cast-shadow of the stick, in winding and turning in and out of round and hollow, projection and depression, brings out the profile or contour of the different surfaces, and the more direct the sun's rays fall on them, destroying the local surface-shades, the stronger will be the effect of the cast-shadow. The Hindus, I am safe in saying, felt this thoroughly, and never allowed a long suit of mouldings to run the risk of appearing tame and uniform from loss of light and shade; these 'stops,' as I have called them, are always brought in every here and there, giving sharp cast-shadows which develope the forms of the moulded surfaces in a most effective and agreeable way. There seems, in fact, to have been a perfect thirst for light and shade—crisp, broken, light and shade—and these stops are so many 'traps,' not 'to catch sun-beams,' but to catch form-explaining shadows. Even in the bases of piers and pilasters, where the horizontal run of the mouldings barely exceeds a couple of feet, there is still the stop, which gives you a vertical 'contouring' midway, and the effect of the

mouldings, thus tied together by narrow strips left in the original surface-plane is, to my mind, charming in the extreme."

# IV.

# DRESS & ORNAMENT IN ANCIENT INDIA.

Importance of dress in civilization. Evidence of the Rig Veda as to clothing; material thereof, wool and cotton. Testimony of the Bible. Silk; proofs in the Rámáyaṇa. Manu on woollen and hempen thread. Arrian's muslins. Specimens of ornamented cloth from sculptures. Dyed cloth. Style of dress. Vedic evidence thereof; sculptural ditto. Ordinary every-day Uriyá male dress; full dress. Ancient Hindu male dress. Uriyá female dress. Evidence of sculptured dress insufficient to settle questions of Indian ethnology. Mr. Fergusson's Dasyus; their relations to the Vánaprasthas. Head dress; coiffure; caps; turbans. Beard. Shoes, boots. Personal ornaments; Vedic evidence; that of Amarávatí; ditto of Bhuvanes'vara. Indian filigree. Crowns, cornets, and tiaras. Ear ornaments. Nose ornaments. Necklaces. Waist ornaments. Leg ditto. Material of ditto. Precious stones.

Importance of dress.

THE first step in the march from barbarism to civilization is indicated by the dress of a nation. Climatic and other causes, no doubt, influence the nature of dress; but no race can be said to have emerged from the grossest barbarism, or the most primitive simplicity, which has not risen to something more substantial, ample, and artificial, than the wardrobe of mother Eve. The skins of animals have supplied the place of cloth to wild races at all times; but it is only after those nations learn to convert them into leather that they can be said to have reached the outskirts of a civilized life.

Vedic evidence.

The Hindus seem to have made considerable progress in this respect at a very early period in their history. The Sañhitá of the Rig Veda, which dates with the Mosaic chronicles, contains many passages which show that even then the people were perfectly familiar with the art of weaving, not only for the necessaries,

but also for the luxuries, of life. The passages, it must be confessed, are brief and casual, occurring mostly by way of similes and comparisons in hymns designed for the glorification of particular divinities ; but they are not the less interesting and suggestive on that account. Thus the verse which describes night as "enwrapping the extended world like a woman weaving a garment,"* gives only a simile, yet that simile refers to a familiar fact, whose existence cannot be questioned. In the same way a hymn to the Ápris makes "night and day interweave, in concert, like two famous female weavers, the extended thread to complete the web of the sacrifice."† Elsewhere we read of the fathers, who "wove and placed the warp and the woof." (X. 30). "Úshá (dawn) is a goddess, in person manifest like a maiden, who goes to the resplendent and munificent sun, and, like a youthful bride before her husband, uncovereth, smiling, her bosom in his presence."‡ Elsewhere, she, "like a wife desirous to please her husband, puts on becoming attire, and smiling as it were, displays her charm."§ Again, "exhibiting her person like a well-attired female, she stands before our eyes, gracefully inclining like a woman who has been bathing."‖ "Úshás, the daughter of heaven, tending to the West, puts forth her beauty like a well-dressed woman." In other places she is frequently represented as "clothed with radiance." The idea is repeated in connexion with the altar, which, in one place, is described as decorated in the same way, "as a wife attached to her husband puts on elegant garments to gratify him."¶ In a subsequent hymn, "the vast offspring of the firmament, the seven eternal ever-youthful rivers," of the Vedic age are said to be "not clothed, yet not naked."** In the remarkable hymn, in

* Wilson's Rig Veda II., p. 307.
† Ibid. II., p. 218.
‡ Ibid. II., p. 9.
§ Ibid. II., p. 12.
‖ Wilson's Rig Veda III., p. 369.
¶ Ibid. III., p. 122.
** Ibid. II., p. 230.

which Trita prays to be released from his confinement in a well, he says, "the ribs (of the well) close round me, like the rival wives (of one husband); cares consume me, S'atakratu, although thy worshipper, as a rat (gnaws a weaver's) threads,"* and the scholiast finds in this, not altogether without reason, a reference to the practice, well known in the time of Manu (VIII., 397), of *sizing threads* with rice water, for the purpose of weaving, and which made them palatable to rats. The whole passage, however, admits of a different interpretation.

In a hymn to Indra, praises and hymns are compared to "elegant well-made garments (*Vastrevabhadra-sukrita*), as being fit to be received as a respectful present"† (*Upasanhâravadgráhyáni*). Commenting on this passage, Wilson says, "If the *rendering* be *correct, this shows* the custom of presenting honorary dresses to be of Indian origin, and of considerable antiquity." Among largesses given to priests by Divodása, the idea of a *Khilat* again recurs: thus the priest says, "I have received from Divodása ten horses, ten purses, ten clothes (a Khilat of ten párchás ?), and ample food." As'vatha gave to Payu "ten lumps of gold, ten well-appointed chariots, a hundred head of cattle."‡ Gifts of "elegantly adorned and well-dressed female slaves" are recited in a subsequent book. The Yajur and the Sáma Vedas, likewise, contain many references of the same kind to clothing, and in one place in the former, "gold cloth," or brocade for a counterpane, is distinctly mentioned;§ but as those works are to a certain extent of comparatively later date, it is not necessary to load these pages with quotations from them.

Wool and Cotton.

No information is available in the Rig Veda regarding the material of which the clothing, it so often alludes to, was made. Cotton is

* Wilson's Rig Veda, I., 271.
† Ibid. III., 277.
‡ Wilson's Rig Veda, III., 474.
§ Taittiríya Bráhmaṇa, III., 675.

nowhere mentioned. Rams and ewes are described among domestic animals,* but they are not said to be the sources of cloth. It is, nevertheless, probable that both cotton and wool were the substances which were used in its manufacture; for the term "weaving," which is occasionally used, could not have originated and got currency in the Vedic language, without the existence of some material adapted to, and in common use for, weaving. "It is difficult to conceive," says Dr. Muir, "that cotton (which, as we learn from Professor J. H. Balfour, is supposed to have been indigenous in India), though not mentioned in the hymns, should have been unknown when they were composed, or not employed for weaving the light cloth which is necessary in so warm a climate."† This argument would apply equally to woollen stuffs in many parts of the Punjab, the earliest Aryan seats in India, where the cold for some months in the year must have necessitated a much warmer covering than cotton cloth. In the Old Testament there are references which show that the ancient Indians did produce enough of woven texture to be able to export a portion for the use of foreign nations.‡ "That the coloured cloth and rich apparel brought to Tyre and Babylon from distant countries, were partly of Indian manufacture will scarcely be doubted," says Heeren, "after what has been already said of the extent of the Phœnician and Babylonian commerce."§

Silk.

The case is different as regards silk. It is a substance which could have scarcely escaped notice, had it been known at the time of the Vedas; but no mention of it has yet been met with. Páṇíni,

* "Who bestows easily-obtained happiness on our steeds, our rams, our ewes, our men, our women, our cows?" Wilson's Rig Veda, II., p. III.

† Sanskrit Texts, V., 462.

‡ Ezekiel, xxvii., 24.

§ Heeren's Historical Researches, III, p. 363.

however, has not only given words for wool, cotton, weaving, cloth, turbans, sewing, &c., all which were, at his time, perfectly familiar, but also for silk for which he gives a special rule.* In the time of the Rámáyaṇa silken, woolen, and cotton stuffs of various kinds were abundant, and in extensive use. According to Válmíki the splendid trousseau of S'ítá consisted of "woollen stuffs, furs, precious stones, fine silk, vestments of divers colours, princely ornaments, and sumptuous carriages of every kind."† The woollen stuff here adverted to, has been supposed by Heeren to have been shawls, for at a time when coarse woollen cloths were used to cover wagons, as was the case in the days of the Rámáyaṇa, nothing short of the productions of the looms of Káshmír, the finest and most precious of woollen fabrics, would have been suitable for presentation to a princess; but the commentator Rámánuja believes it to have been a stuff from Nepal. That the "fine silk" was a manufactured article is evident from the frequent allusion in the work to silk vestments of various kinds, worn not only by queens and princesses, but also by other persons of quality. When Ráma and his brothers arrived at the capital from Mithilá with their new-married brides, Kausalyá, Sumitrá, the fair Kaikeyî, and the rest of the royal zenáná, "eager to embrace their beauteous daughters, received the happy S'ítá, the far-famed Urmilá, and the two daughters of Kus'hadhvaja, all sumptuously dressed in silk, and entertaining each other with agreeable conversation, hastened to the

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* कोशाड्ढञ्। ४। ३। ४२। कोशसम्भूतं कौशेयं वस्त्रम्।

† अथ राजा विदेहानां ददौ कन्याधनं बहु।
गवां शतसहस्राणि बहूनि मिथिलेश्वरः॥ ३॥
कम्बलानाञ्च मुख्यानां क्षौमान् कोट्यम्बराणि च।
हस्त्यश्वरथपादातं दिव्यरूपं स्वलंकृतम्॥ ४॥

Rámáyaṇa, B. I., Canto 74B.

temples of the gods to offer incense."* Elsewhere we read—

> " Go quickly hence, and with you bear
> Fine silken vestures, rich and rare,
> And gems and many a precious thing
> As gifts to Bharat and the king."†

At the time the Laws of Manu were codified, the profession of dealing in woollen stuffs had so far fallen in repute that it was prohibited to the Bráhmaṇs (X. 87), and the use of such stuffs was assigned to the third class of students in theology, the first and second wearing antelope-skin and woven hemp, (II. 41). The sacrificial strings in the same way were required to be made of cotton, hemp, and wool, for the three classes respectively (II. 44).

Various places where stuffs were manufactured.

The Rámáyaṇa does not give us any clue to the different places which were noted for the manufacture of particular articles of clothing; but some hints are available on this subject in the Mahábhárata. In the Sabhá Parva of that work, the poet enumerates the several presents which princes and potentates from various parts of India, brought to the presence of Yudhishṭhira, and among them are mentioned clothes and skins, the former made of wool and embroidered with gold, being in fact, shawls and brocades; the latter "the skins of animals that live in holes, and of wild cats, intending

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* कौशल्या च सुमित्रा च कैकेयी च सुमध्यमा ।
मधुप्रतिग्रहे युक्ता याश्चान्या राजयोषितः ॥ ८ ॥
ततः सीतां श्रीप्रतिमामूर्मिलां च यशस्विनीं ।
कुशध्वजसुते चैव परिगृह्यानुगृह्य च ॥ ९ ॥
ततः प्रवेशयामासुर्नववेश्म स्वलंकृताः ।
मङ्गलालपनीयैश्च शोभितः क्षौमवाससः ॥ १० ॥
उपनिन्युश्च ता एता देवतायतनान्यपि ।
अभिवाद्याभिवाद्यांस्तांस्तत्र पूज्यान् गुरूंस्तथा ॥ ११ ॥
Gorresio's Rámáyaṇa I., p. 297.

† Griffith's Rámáyaṇa, II., p. 270.

probably furs of varieties of the martin and weasel families," brought by the Kámbojas or people of the Hindu Kush; "blankets of various manufacture" by the A'bhiras of Guzarát; clothes of diverse kinds not made of cotton, but of the wool of sheep and goat, or of thread spun by worms (silk?), or of *patta* vegetable fibres or hemp linen, or made by machinery (woven?) by the Scythians, Tukháras and Kankas; housings for elephants, by princes of the Eastern tribes, lower Bengal, Midnapur and Ganjam: and fine linen (? muslin), by the people of Carnatic and Mysore."* After a careful study of this passage, Professor Wilson is of opinion that "silk, both raw and manufactured, was no doubt an article of import from China into India at a very early date."† In the first century before Christ, king S'údraka makes the buffoon of his play, the *Mrichchhakatika*, enquire about the brother of a courtezan:

"Who is that gentleman dressed in silken raiment, glittering with rich ornaments, and rolling about as if his limbs were out of joint?" (Act IV. Sc. II.)

The mother of the Aspasia appears arrayed in "flowered muslin" with her "well-oiled feet thrust into slippers."

In the time of Alexander's invasion, the Greeks were particularly struck with the extraordinary whiteness of Indian clothing, and did not fail to notice with great curiosity, as Herodotus and others had done before them in Egypt, that they were manufactured with the "tree wool," or "wool produced in nuts." Shortly after, Arrian, in the Periplus to the Erythrian Sea, noticed several kinds of cotton fabrics, both thin and thick. He names three principal sorts:—

*1st.*—'Ινδικὸν τὸ πλατύτερον ἡ λεγομένη Μόναχη. Wide Indian muslins called Monakhè.

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* Wilson, in Journal Rl. As. Soc., VII., 140.

† Royle, on the Productive Resources of India, p. 117.

*2nd.*—Σαγματογήνη. Muslins in single pieces.

*3rd.*—Χυδαῖον. Coarse muslins.

He has also a coarse cotton fabric of the colour of the mallow of the name of Μολόχινα, a fine muslin (? linen) of the name of λέντια, and other muslins of the name of καρπάσος. His Σινδόνες αἱ διαφορώταται Γαγγιτικαί, it is evident, was also a variety of the finest Bengal muslin*.

Cloth in sculpture.

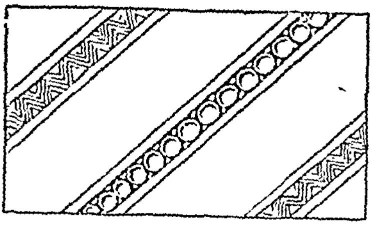
It is not to be expected that ancient sculpture should afford us any valuable information regarding this branch of our enquiry. The material and quality of woven texture can be but ill-represented in marble, and in such rough stones as the sculptors of India ordinarily had at their disposal, nothing of the kind was practicable. Nevertheless, they are not altogether silent on the subject. In the two principal statues in the great temple of Bhuvanes'vara, which are made of a superior kind of chlorite, and placed in deep recesses, completely protected from the sun and rain, the artist has attempted to produce a vestment of rich brocade, proving that fabrics of that description were then, as they are now, highly prized articles of luxury, familiar with the people. A specimen of this cloth is represented in woodcut No. 20. A glance at it will show that in neatness, elegance, and richness of design and execution, it is in no way inferior to the finest production of the Benares loom of the present day. In the temple of [illegible], or "the boat-shaped temple," several figures of dancing girls are dressed in clothes of variegated patterns, and one in a [illegible] drawers, of diagonal stripes enclosing designs of [illegible], and zigzag lines. (Woodcut No. 21.) A male figure in the same

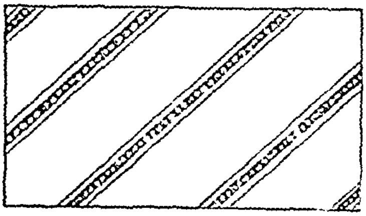


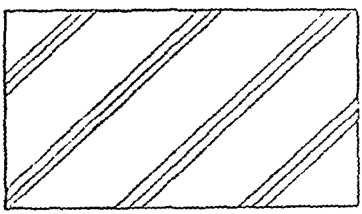
No. 20.

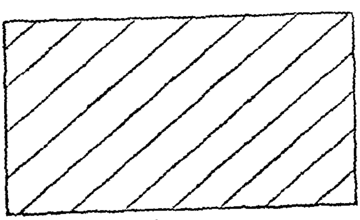
* Vincent's *Periplus*, Appendix vol. I., [illegible] 66, 76.

temple, has a pair of short-drawers of a similar kind of cloth, the stripes being relieved by spots only. (Woodcut No. 22.) A petticoat of a female figure has triple stripes but no spots, sprigs, or other design. (Woodcut No. 23.) On some of the statuettes in Lakshmi's Temple, there are also clothings of different designs, one of which with single stripes is shewn in woodcut No. 24. On a female figure playing with a child, brought from Bhuvanes'vara, and now in the Indian Museum, a double striped pattern with wavy lines is distinctly seen. (Woodcut No. 25.) On another figure (No. 808) the ground between the wavy horizontal stripes is relieved with detached flowers of two kinds, and the border is elaborately wrought, woodcut No. 27, and the attendant of this figure has cloth with stripes, but no flowers. Woodcuts Nos. 28 and 29 exhibit clothes of the same kind, but the flowers are of different patterns. In the group of Silénos in the Asiatic Society's Museum, which, is of Indian origin, and dates, at least, from the beginning of the Christian era; there is a male figure dressed in a *chapkan*, the cloth of which is a kind of flowered muslin, having sprigs all over the ground. (Woodcut No. 26.) On another piece of sculpture in the same collection brought from Behar, and from the character of the inscription on it, apparently of the eighth or ninth century, there is a representation of

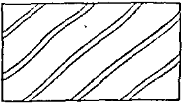

No. 21.


No. 22.


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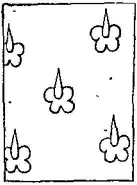
a kind of cloth with diagonal stripes relieved by flowers of



No. 25.

two patterns. A Buddhist rail-post from Buddha Gayá, also in the same collection, shows cloth of a check pattern. (Woodcut No. 30.)

The selvage of cloth is represented on many figures, and coloured borders on others. The fineness and transparency of scarfs are sometimes

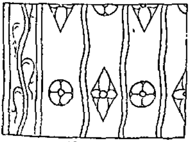


No. 26.

attempted to be shown, but the attempt has not been successful, and what appears now to be the success of art is probably due to inefficiency in representing the folds of the costumes.

Dyeing of cloth.

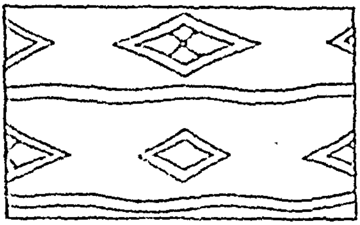
Early Indian literature is silent with respect to the different colours used in dyeing textile fabrics in ancient times. But the great abundance of vegetable dyes in India could not but have attracted the notice of such



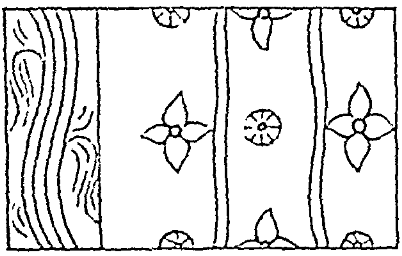
No. 27.

an intelligent race as the early Aryan settlers were, and, looking to the frequent mention of dye stuffs by Manu and other lawgivers, *it is to be presumed that they were extensively used* by the people in colouring their clothing. The rude aborigines, such as the Bheels and Gonds, likewise availed themselves of the supply, and probably coloured their scant clothing and ornamental feathers and fibres to as large an extent as in the present day. Mention is frequently made of Aryan women staining the soles of their feet, and the palms of their

hands, with a bright crimson dye extracted from sapan wood, and the practice of using colours for beautifying the face was not uncommon. In astrological works, black clothing is said to be appropriate to the planet Saturn, yellow to Venus, and red to Mars, and the sin-steeped awning of Parikshita is described to have been of a black colour. Krishṇa and other gods had, likewise, particular favorite colours for their dresses, and Indian poetry is eloquent on the charming effect of fair women dressed in blue cloth, which is often compared to a dark cloud relieved by the lightning flashes of beauty.



No. 28.



No. 29.

No rules, however, appear to have been laid down for the use of distinctive colours by householders; and with the solitary exception of hermits, who were required to wear an ochre-coloured vestment, each individual was left perfectly free in the choice of colours for his dress. Indeed, in this respect the Indian Aryans differed entirely from the Egyptians, the Chinese and also from the ancient Irish, who had particular colours fixed to distinguish the rank and caste of every order of society. In Ireland, King Eochaidh, it is said, first laid down the law, in the year of the world 3664, regarding colours, to mark the different ranks of the people, and thence obtained the surname of Eadghadhach. His law required "one colour in the clothes



No. 30.

clothes of slaves; two in the clothes of soldiers; three in the clothes of goodly heroes, or young lords of territories; six in the clothes of ollavs (professors); seven in the clothes of kings and queens."* The Egyptian rule, if not so strict, was still well-defined, and among the Romans, the Tyrian purple, as is well known, was exclusively reserved for emperors. The Chinese are also particular in this respect. But in India no colour, or combination of colours, seems to have been forbidden to any one class or individual from the highest to the lowest. In the total absence of old paintings, it is, however, impossible to obtain any evidence on the subject from ancient remains.

Style of dress.

The Vedas afford no information regarding the form and shape of the Hindu dress. Probably, the majority of the people did then, as they do now, wear scarfs or plaid-like articles *(dhuti)* completed in the loom for immediate use, keeping them in position by twisting and tucking round the waist,—"a form of dress than which," according to Col. Meadows Taylor, "anything more convenient to walk, to sit, or to lie in, it would be impossible to invent."† The companions of Alexander noticed the same style of dressing nearly two and twenty centuries ago, and the costume of the masses at the present time differs in no respect from what the Greek writers indicated in their descriptions. *But the question may be fairly asked,* were kings, princes, and chieftains, the nobles and men of quality, of former times content with the simple *dhuti*, and did they not differ in any respect from the people at large in their habiliments? Such a state of uniformity in dress is unknown even among the rudest community, and would be

* Clanmacnoise Annalists, O'Donovan's translation, Apud Catalogue of Antiquities in the Royal Irish Academy, I. 297.

† Edinburgh Review for July, 1867.

altogether improbable among a race who first established the system of castes. Nor is evidence wanting, circumstantial though it be, to show that a very different state of things existed among the Indian Aryans in early times. The mention of the needle and sewing in the Sañhitá of the Ṛig Veda,* cannot but suggest that even at that early period, made dresses, or such as had been prepared with the aid of scissors and needle, were not unknown. The word used is *s'úchi*, the same which is used to this day to indicate a needle, and it is not likely, therefore, that the word then meant only a thorn, or other small pointed object. The existence of such words as needle *(s'úchi)* and sewing *(sivan)* in the Vedic language cannot be accounted for, except on the supposition that the people who used them, knew and had what they meant. It may also be argued that it is very unlikely that the heroes of the Vedic times, who were able to forge and were in the habit of using armour and mail coats, never came to the idea of fashioning their clothes into made dresses?†

Sewed dress in Sculpture.

The sculptures of Sánchi, Amarávatí, and Orissa, leave no doubt on the subject. Though, owing to causes to be presently noticed, the bulk of the human figures they represent are nude, or very scantily clothed, still there are some which bear unmistakable evidence of the existence of made dresses. Among the Sánchi bas-reliefs, there are several figures dressed in tunics which could never have been made without the aid of needles. The tunics of the two archers on plate XLIII., Fig, 3, of Mr. Fergusson's work are particularly

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* Wilson's Ṛig Veda II. p. 288, IV. p. 60.

† "*Sivyatu apah s'uchya chhedyamánaya*, "may she sew the work with a needle, that is not capable of being cut or broken,—with one, of which the stitches will endure, in like manner as clothes and the like wrought with a needle last a long time, according to the commentator." Wilson's Ṛig Veda, II., 288.

remarkable, inasmuch as the *chapkans* there shown, are



No 31.

unmistakable. (Woodcut No. 32) Plates XXVIII., Fig 1, XXXIV., Fig. 2, XXXVI., Fig. 2, and XXXVIII., Fig. 1, are also worthy of notice as afford ing unquestionable evidences of the use of made dresses. A flag-bearer on an elephant has a dress, the sleeves of which are distinctly shewn. (Plate XL., Fig, 2.) On a Buddhist rail-post from Buddha-Gayá, which probably dates from a time earlier than the Sánchi rail, there are two figures fully dressed from the neck to the middle of the leg, in a garment which appears strongly like the *jamá* of the present day. Woodcut No. 30.

Turning from them to Amarávatí, the reader will find, among an endless host of nudes and seminudes, figures, the shape of whose habiliments is unmistakably due to the tailor's art. (Plates LXVI and LXXXIV., Fig. 2.) The figures of Buddha and of priests are also everywhere clothed in a decent attire from the neck to the feet, though in their case the habit seems to be formed of loose plaids thrown lightly over the person, and not needle-made.

The sculptures of Orissa offer even more positive proofs. In the Queen's palace (*Ráṇinaur*) among the rock-cut caves of Udayagiri, there is a statue, four feet six inches in height, cut out of the solid rock, which is dressed in a close-fitting tunic or *chapkan*, with the skirts hanging down four inches below the knee, and having sleeves down to the wrist. According to Rev. T. Acland,* over the *chapkan*, there was "a short

* A Popular Account of the Manners and Customs of India, p. 120.

shirt of scale armour," the sleeves of which reached the elbow.



No. 32.

This, however, is not now visible. A light scarf passes round the waist and over the left shoulder, the ends floating in the air, exactly in the way in which the Hindus throw the scarf on their persons in the present day. A girdle or *kamarband* round the waist holds, on the left side, a short sword. The head is partially mutilated, but there are traces on it of a twisted turban. The legs and the feet are enclosed in thick, high boots or buskins. The figure has suffered by long exposure to rain and sun, but enough is preserved in the woodcut, No. 32, to show that the coat of the figure is made unmistakably of sewed cloth. If the arguments regarding the age of the Udayagiri caves, adduced, in my "Antiquities of Orissa" be tenable, the figure is over two and twenty centuries old; and at that period, the Buddhists evidently knew the use of made dresses. The habit is so entirely Indian in its character, that none will venture to spy in it any resemblance to the *chiton*, the *chlamys*, or such other vestments as the soldiers of Alexander brought to India,† even if it were possible to suppose that it would be at once imitated in stone many hundreds of miles away from the place where it was first exhibited, and the inveterately conservative Indians could be imagined to

† It may be remarked *en passant* that, according to Plutarch, instead of Alexander teaching the Asiatics the use of made dresses, that hero himself adapted an Asiatic dress. He first put on a Parthian mode. He thought, however, "the habit made too stiff and exotic an appearance, and therefore took not the

have resigned, against the common instinct of civilized man *in every part of the world, their national attire* at the first sight of a foreign garb. The tunic may be compared to that of the Assyrian foot-soldier, but its sleeves are long, and come down to the wrist, whereas the Assyrian sleeve, as far as can be made out from Layard's plates, never reached below the elbow, leaving the forearm bare. The boots are particularly worthy of notice, as nothing of the kind has anywhere else been seen in India of so old a date Three warriors at Amarávatí are habited very nearly in the same way, but without the boots. For ready reference I have copied as much of two of them as is visible in Mr. Fergusson's plates. Woodcuts Nos 33 and 34.


No. 33.

Among the sculptures on the temples of Bhuvanes'vara, there are also several representations of needle-made dresses. A basso-rilievo horseman in the dancing-hall of the Great Tower, is dressed in a perfect *jámá*, of the pattern to be seen on the Rajput horsemen figured in Col. Tod's Rájasthan. Its date, however, is doubtful. Several statuettes on the Muktes'vara temple are dressed in petticoats or kilts, the Indian *ghãgrá* held round the waist by a jewelled girdle or zone. The outline of this habit is so well defined that it leaves no doubt in the mind of its shape and form being due to scissors and needles. The statuette represented in woodcut No. 35. offers a remarkable

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breeches, or the sweeping train, but adapting something between the Median and Persian mode, contrived vestments more pompous than the former, and more majestic than the latter. At first he used this dress only before the barbarians, or his particular friends within doors; but in time he came to wear it when he appeared in public, and sat for the despatch of business." Langhorne's Plutarch, p. 483. Of course this was most probably done with a view to conciliate the conquered people; but it is not very favorable to the theory of Greek dress having been readily adopted by the latter.

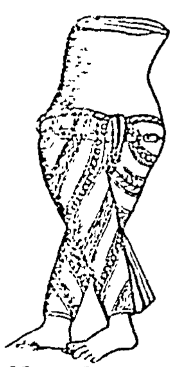
instance of this habit. The bust of the figure is enclosed in a tight bodice such as is now in common use in many parts of India, and a long scarf, the substitute for a Grecian himation and the North Indian *urna* or *chadar*, is thrown over the shoulders, with its two ends floating in the air. As the figure shewn in the woodcut is that of Annapúrṇá, a form of Durgá, offering a cake in a ladle to her lord, S'iva, it is impossible to suppose that the artist has dressed the goddess in a foreign garb, even if it could be shown that foreign models of the kind were accessible to him. The *páyajámá* noticed above, (woodcut No. 36), is held round the waist by a string with a chain and girdle over it, in the same way as Muhammadan women now wear it, but there is a piece of cloth passed between the thighs tucked behind, probably also so secured in front, the use of which appears quite inexplicable, unless it be assumed to be an imitation of the cloth which wrestlers use over their short-drawers to tie their body firmly. The short-drawers on the same temple, shewn, in Illustration No. 80, of my "Antiquities of Orissa," though well defined on the figure appear to be doubtful, as they have, besides the longitudinal piece noticed above, a cross belt tied a little above the hip-joint, very much in the same way as the figures of the shepherd Krishṇa are dressed at Vṛindávana in the present day, and in their case it is the *dhuti* that is arranged so as to represent short-drawers, and no sewed cloth is used.



No. 34.



No. 35.



No. 36.

Among the Ajanta frescoes, "there is a picture of two holy men, one of them is touching the head of an elephant; he holds a cup in his left hand, and wears a long robe reaching to his feet, with very full loose sleeves; the other, who has a nimbus round his head, has an elaborate drapery, in folds like that of a Greek statue."* In the earlier S'atí memorial stones, and in sculptures on the Hullabeed Temple in Mysore, females appear in bodices tied in front. According to the Sáradá-Tilaka the women of Guzarát used to button their bodices with gems below the hips.† And in all these occur proofs of the use of the needle in the formation of dresses.

Opinions of Buchannan Hamilton, &c.

It is not to be denied that these instances are few, but their evidence as far as it goes, is authentic and unmistakable, and, I venture to think, cannot be gainsaid. The nature of the Indian climate is such that for nine months in the year all dresses are more or less unpleasant, and even the British soldier here feels, in April and May, more comfortable without his shirt than with it, and, if not prevented by military discipline, would gladly throw it aside; it is not remarkable, therefore, that the natives should confine themselves to the smallest amount of clothing that decency and the habits of the country permit. But that does not suffice for a universal conclusion as to the total absence of all made dresses. At any rate the instances quoted are enough to set aside the theory, first started by Buchannan Hamilton,‡ and since adopted by Messrs. Muir § and Watson,‖ regarding the Muhammadan origin of the Indian shaped dress as altogether untenable.

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* Col. Meadows Taylor, *Edinburgh Review*, for July, 1867.

† Wilson's Hindu Theatre, II. 384.

‡ Martin's Eastern India II. 699.

§ Sanskrit Texts, V. 462.

‖ Textile Manufactures of India, II.

It has been somewhere said that had the ancient Hindus needle-made garments they would have had in their language names for them as well as for tailors; but that they have none such in Sanskrit. This is, however, a mere assumption. The case is quite otherwise. In the Vocabulary of Amara Siñha, there are two words for workers with needle, one applying exclusively to those who confine their profession to darning, and the other to general tailoring.* The first is *tunnaváya*, a word very similar to *tantuváya* "a weaver," and the other, *S'auchika* or *S'úchika*, general worker with the needle. The profession of the latter was of sufficient importance to necessitate the establishment of a separate tribe, and a mixed class, the lawful issue of Vaisyas by S'údra women, was, according to the ancient law-book of Us'anas, destined to live by it, and other manual arts.† These bore the distinctive tribal name of S'auchí or needlemen.

Sanskrit names for tailors.

It is not to be denied that in Bengal, with the exception of the Ácháryas who are employed in making dresses for idols, and noted for their expertness in darning, tailoring is now the special profession of Musalmans ; but elsewhere the case is not so. Mr. Sherring observes: "In addition to the Muhammadans engaged in this calling, there is a considerable number of Hindus of an inferior caste who pursue it likewise. They are a separate tribe, and are divided into seven sub-castes or clans, as follows:—1, Srí Bástak ; 2, Nám Deo ; 3, Tánchára ; 4, Dhanesh ; 5, Punjábi ; 6, Gour ; 7, Kantak." An eighth is also found in Benares named Tákseri.‡

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* तन्तुवायः कुविन्दः स्यात्तुन्नवायस्तु सौचिकः ।
तुन्नं छिन्नं वयति ॥ Amarakosha.

† शूद्रायां वैश्यसंसर्गाद्विधिना सूचकः स्मृतः ।
सूचकाद्विप्रकन्यायां जातस्तक्षक उच्यते ॥
शिल्पकर्म्माणि चान्यानि प्रासादलक्षणं तथा ॥
इत्यौशनसं धर्म्मशास्त्रम् ॥

‡ Hindu Castes and Tribes of Benares, p. 341.

As regards the names of made dresses, it is to be observed that the forms of the ancient garments having become obsolete for centuries, their names have likewise fallen into disuse, and what formerly indicated particular forms are now accepted as common terms for dress. There are, nevertheless, some words, the import of which cannot be mistaken, such as *kanchuka*, *kanchulika*, *angika*, *cholaka*, *chola kurpásaka*, *adhikánga*, *niví*, &c.

Sanskrit names of made dresses.

The most important of these is the first. It is defined as "a soldier's dress, shaped like a bodice," a made garment for the body, hanging either as low as the hip or lower down to the legs, *i. e.*, a jacket or a coat. The word *sannáha*, used in its definition,* and which is used for a mail coat, as well as a coat of quilted cotton, has led to its being occasionally confounded with the *varma* or chain-mail, and in some modern dictionaries, it is described as "an iron garment for the protection of the body from arrows", but that it was formerly made of cloth is evident from its having been used by other than warriors. The sages and hermits who came to the great coronation festival of Yudhishthira, are described in the Mahábhárata as being dressed in turbans and *kanchukas*,† and in their case it would be inconsistent to accept the coat as a hauberk or a cuirass. The immediate ordinary, every-day attendants of kings [illegible] be old, are also said to be so attired and from their description it would seem that the [illegible] made of cloth in the [illegible]. The ordinary term for the [illegible] is [illegible] it is not to be [illegible] in [illegible]

* [illegible]

† [illegible]

S'ríharsha, a warder of this class offers protection under the folds of its *kanchuka* to a dwarf who had been frightened out of his wits by a little monkey getting loose from its chains and gambolling about, * and this could not have been possible unless the coat had been of cloth with skirts hanging down close to the ankles. In the present day the flowing forepart of the *dhuti*, which looks very like the folds of the skirt of the *jámá*, is called *konchá*. Fair maidens in noble families are said to have, likewise, draped themselves in this garment to heighten their beauty, and it would be absurd to suppose that they used metallic jackets for such a purpose.

The dimunitive of the *Kanchuka* is *kanchulika*, and it is universally known to be a cloth bodice, and all respectable women, and even goddesses, are said to have worn it. Its modern name is *kánchulí*, and it is in common use all over India, except among family women in Bengal. Over it is worn a thin, light jacket reaching to the waist, with sleeves to the elbows. This is called *angiá*; Hindi, *kurtá*. To those who know the Prákrit language, this will at once appear to be a corruption of the Sankrit *angíka*, the *k* being, by a well-known rule, changed into *a*. It is probable that the name of the male jacket *angarkhá* of the present day is a modification of the same word, unless it be a corruption of *anga*, body, and *rakshyá*, protection. In Wilson's Dictionary the word *chola* is explained as "a short jacket or bodice;" but it was more like a waistcoat, something closely resembling a *fatui*, or *sadri* of the Muhammadans, for Indian tailors still call the torso or the body part of a coat *cholá*, and its appendages *ástin*, sleeve; and *dáman* skirts, and the Sanskrit *cholaka* is explained to be a breast-plate.

The word *nívi* is also remarkable. It is the name of

* अन्तः कञ्चुकिकञ्चुकस्य विशति त्रासादयं वामनः ।

the tape with which drawers *(páyajámá)* or the petticoat *(ghágrá)* is tied round the waist. It could not have had an existence in the language if there had been no *páyajámá* or *ghágrá* to tie.

Style of dressing.

Sculptural evidence regarding the style of dress is not always reliable, artistic and other causes being against a faithful representation of the current style of dress. Subject to this reservation and relying on sculpture for our guide, the ordinary style in which Uriyás of quality used to put on the *dhuti*, twelve hundred years ago may be assumed to be what is shewn in my "Antiquities of Orissa," figs. Nos. 81 and 82. It does not differ from the mode of the present time, except in the jewelled girdle with a pendant in front. This appendage, however, was probably introduced to heighten the artistic effect of the figures, and was not in common use. The statue of Kártikeya in the great Tower of Bhuvaneśvara has the *dhuti* tied firmly round the waist in keeping with the martial character of that deity. Figures Nos. 82, 83 and 86 of that work, represent the *dhuti* as worn by common people and labourers. In [illegible] and [illegible], the same style is delineated with but slight differences.

The *dhuti* [illegible] plentifully in all the three places, and the mode of wearing it was the same as at the present day. [illegible] the *[illegible]* [illegible] on the [illegible] was probably the prevailing [illegible] for kings, princes and men of quality, while the [illegible] *jámá* was [illegible] state [illegible] and attendants on kings. [illegible] over the [illegible] the waist [illegible]. The [illegible] in the [illegible] Bombay and [illegible] similarly [illegible]

*jámá* may have been brought by the Aryans from Central Asia, but as it is still now seen it is thoroughly Indian and of ancient date. The Pársis accepted it from the Hindus about twelve hundred years ago, and have since preserved it, with a few modifications and mutilations, as their national dress; the modifications in their hands, however, have not been so extensive, as in that of the Moslims in India, who in Akbar's time adopted it as a court dress. The pattern preserved in Rajput sculptures figured by Tod, and on the horseman in the Bhuvanes'vara temple, is perhaps the nearest approach to the ancient habit: it differs from the modern style principally in having short skirts.

Female dress.

The prevailing character of the ordinary female dress in sculptures is very much alike in the three places, and Mr. Fergusson's description of Sánchi and Amarávatí, apply equally to Orissa. "The costume of the women," he says, "is difficult to describe, though this is principally in consequence of its scantiness. Both at Sánchi and Amarávatí, the women always wear enormous bangles about the ankles and wrists,* and generally strings of beads round the neck, but their body clothing is generally limited to a bead belt round the body below the waist. From this belt slips of cloth are sometimes suspended, more generally at the sides or behind than in front, and sometimes also a cloth worn something like the *dhuti* of the male sex is also added, but when that is the case, it is represented in the sculptures generally as absolutely transparent." †

It may be questioned, however, as to whether these habits were really the prevailing costumes of the country at

*The same bangles are still in common use by the lower orders of the people in Orissa, but in sculptures they are generally replaced by articles of lighter and more elegant designs.

† Tree and Serpent Worship, 92.

the time, or only the conventional modes of representing the female form? Mr. Fergusson, who has devoted his attention for some time to Indian antiquity, is disposed to accept the first branch of the alternative, and it is certainly not easy to question the testimony of authentic graven stones. That testimony, however, is in direct conflict with the evidence of equally authentic written records. The passage from the Ṛig Veda quoted above (p. 167) in which Ushá is compared to "a youthful bride before her husband, uncovering, smiling, her bosom in his presence," depicts a peculiarity of Indian female dress, which it would be difficult to conceive had altogether disappeared from the land when the sculptures were incised, and that a bead girdle was the only attire for the body left even to queens and princesses; when improvements in other respects of social life were marked and progressing; when people lived in two and three storeyed houses of brick and stone, such as the Sánchi bas-reliefs represent; when they drove about in carriages and wagons; freely wrought in gold, silver, copper, and iron; and manufactured woven fabrics enough to be able to export large quantities of them to the, for the time, highly civilized countries of the West, where they were highly prized.

The veil, the bodice, and body-clothes, are repeatedly mentioned in the Rámáyaṇa and the Mahábhárata; and both in the Hindu and the Buddhist codes of law and morality, modesty of dress in women is everywhere insisted upon as a matter of paramount importance. In the ancient code of laws by S'aṅkha, there is an ordinance which says, "Let no woman go out of the house without permission; nor without a sheet over her dress; nor should she be allowed to run or walk very fast; nor speak with male strangers, unless they be tradesmen, hermits, old people, or medical practitioners; nor allow her navel to be seen: she should be so dressed that her clothing should hang down to the ankles; and the breasts should

never be exposed." * Gobhila enjoins that "women should always wear a sheet, (the Grecian *peplos* or the Roman *palla*) over their body-clothes."† Hárita says, "the first duty of woman (in the morning) is to bathe and put on (clean) clothes;"‡ and among the most important daily duties of women, Rishyasringa enumerates, "cleanliness, attention to the duties of the house, the polish of the household utensils, bathing, dressing, plaiting the hair in braids, and putting flowers thereon."§ Other authorities are equally particular in this respect, and everywhere the most important duty enjoined on husbands and relatives is to supply good clothing to the ladies of one's house. Manu even goes the length of prohibiting husbands from looking at their wives when engaged in the mysteries of their toilette, and of denouncing the sight of nude females as sinful.||

The veil, as a mark of propriety and modesty before seniors and strangers, is everywhere insisted upon, and this idea is carried to the ridiculous extent of prohibiting the offering of

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* नानुक्ता गृहान्निर्गच्छेत्, नानुत्तरीया न त्वरितं व्रजेत् न परपुरुषं भाषेतान्यत्र वणिक्प्रव्रजितवृद्धवैद्येभ्यः न नाभिन्दर्शयेत् आगुल्फाद्वासः परिदध्यात् न स्तनौ विवृतौ कुर्य्यात्। इति शङ्खः।

† प्रावृतां यज्ञोपवीतिनीमिति गोभिलसूत्रम्।

‡ इत्युपक्रमे स्नात्वा वाससी परिधायेति हारीतसूत्रम्।

§ गृहमेध्या भवेन्नित्यं भूषणानि च पूजयेत्।
नित्यस्नानकृताः वेणीमञ्चयेत् पुष्पवाससा। ऋष्यशृङ्गवचनं।

|| नाञ्जयन्तीं स्वके नेत्रे न चाभ्यक्तामनावृतां।
न पश्येत् प्रसवन्तीञ्च तेजस्कामो द्विजोत्तमः ॥ ४४ ॥
नाग्निं मुखेनोपधमेन्नग्नां नेक्षेत च स्त्रियं।
नामेध्यं प्रक्षिपेदग्नौ न च पादौ प्रतापयेत् ॥ मनुः ४—५३ ॥

"Let not a Bráhman, who desires manly strength, behold his wife setting off her eyes with collyrium, or anointing herself with oil, or when she is in *des-habille*, or bringing forth a child." IV. 44.

"Let him not blow the fire with his mouth, let him not see a woman naked, let him not throw any foul thing into the fire, nor let him warm his feet in it." Manu, IV. 53.

the funeral cake to a grandfather without first covering the cake to the mother with kus'a grass, as emblematic of her veil, for even in spirit she should not appear before her father-in-law with her face uncovered.* In the case of men not only is nudity prohibited, but even a single garment is held insufficient for propriety. Manu forbids a single garment when at meals,† and the Vishnu Puráṇa ordains that "a man must neither bathe, nor sleep, nor rinse his mouth, whilst naked; he must not wash his mouth, nor perform any sacred rite, with his waistband unfastened, and he must not offer oblations to fire, nor sacrifice to the gods, nor wash his mouth, nor salute a Bráhmaṇ, nor utter a prayer with only one garment on."‡ In the *Samayachárika-dharma-sútra* of Ápastamba, even a Brámhachárí, just returned from his noviciate, is required to dress himself with a *jámá (kaṇchuka)* over his body-clothes, and to move about with either shoes or pattens on.§

The Buddhists are equally particular in this respect, and have many positive injunctions against impropriety in dress. Mr. Fergusson suspects, that the story given in the Dulva of a lewd priestess, who created great scandal by wearing in public a piece of muslin of so thin a texture that she appeared naked, and the canons which say, that to go about with thin dress on is absolutely immoral, are of modern origin; but notwithstanding the lavish freedom with which the theory of interpolation has been of late worked

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* पतिनैकेन कर्त्तव्यं सपिण्डीकरणं स्त्रियाः ।
स गता हि स्वतैकत्वं कुशैरन्तरयन् पितॄन् ।
श्वशुरस्याग्रतो यस्मात् शिर प्रच्छादनक्रिया ।
पुत्रैरपि या सा कार्या मातरभ्युदयार्थिभिः ॥ गार्ग्यः ॥

† Manu IV. 45. ‡ Wilson's Vishnu Purána, III. 139.

§ माल्यनिप्रसुप्त उपनिप्रवेशप्रसन्धुरक्षोभ्यक्तो वेष्टित्युपवेष्टितो काष्ठधुरमानह्रौ पादुको । Buhler's A'pastamba, p. 14.

out in support of particular ideas, it is not at all likely that anybody will attribute the simile in the Ṛig Veda to a mischievous tampering with the original by interested and unscrupulous Bráhmaṇs. The only reasonable inference that can be drawn from the passage is, that in the times of the Ṛig Veda, the covering of the bust was deemed an essential element of female modesty by, at least, certain classes of the community; and that that idea has been since kept alive by their descendants who composed the Rámáyaṇa, the Mahábhárata, and other later Sanskrit works, is so manifest in those records that little need be said in support of it. The greatest insult which the wicked Kurus could offer the Páṇḍus, was to order their wife, Draupadí, to be disrobed in open court, and that lady in her anxiety, most piteously prays Kṛishṇa to save her modesty.

In the first century before Christ, Pururavas exclaims at the sight of his ladylove:

> "Soft as the flower, the timid heart not soon
> Foregoes its fears. The scarf that veils her bosom
> Hides not its flutterings, and the panting breast
> Seems as it felt the wreath of heavenly blossoms
> Weigh too oppressively." *

Even woodland maidens at the time could not go about without a covering for their bust, and in the *chef d'œuvre* of Kálidása, S'akuntalá complains of her bodice being too tightly tied about her chest; whereupon the king remarks:—

> "This youthful form whose bosom's swelling charms
> By the bark's knotted tissue are concealed,
> Like some fair bud close folded in its sheath,
> Gives not to view the blooming of its beauty." †

In the original Sanskrit, the mode of tying the bodice by a tape behind the neck is distinctly indicated.

* Wilson's Vikrama and Urvasí, Act I. Sce. I. II. p. 200.

† *Williams' S'akuntalá, p. 15.*

That there were certain races or tribes then, as there are to this day, who, like the Kúkis, the Patuás, and the Goṇḍs wore little or no clothing, is of course a fact not to be questioned. But it is more than probable that they were then, as now, only wild savage tribes who skirted the civilization of the Aryans, and did not represent the social condition of the country: certain it is, that they were not the builders of the Sánchi gateways, nor of the Amarávatí rails, nor of the temples of Bhuvanes'vara.

The annals of the S'akya race as preserved in Sanskrit, Pálí, Tibetan, and Chinese, represent them to have belonged to the foremost of the Aryan race, the Kshatriyas, whose mode of life, if any faith is to be reposed on those records, was entirely different from that of the Paṭuás and of the Kúkis. When Siddhártha retired from home, he went forth, it is said, in the full court-dress of a prince, which he exchanged for the humble yellow vestment of a hermit, when he arrived at a neighbouring wood. If the sculptures are to be accepted without any qualification, the whole of these records must be entirely rejected, and we must believe that kings and princes, as shewn on Mr. Fergusson's plate, XXXI., went about with their bodies all uncovered, while the priests were clothed to the neck with scrupulous care; that Siddhártha gave up a narrow *dhuti* for something that covered his person from neck to ankles; and that the attire of Máyádeví, the mother of Buddha, was somewhat less ample than the traditional "fig leaf" of Eve, consisting, as it does in sculptures, solely of a narrow bead cincture below the waist. The large Amarávatí stone in the Museum of the Asiatic Society of Bengal, represents Máyádeví reclining on what appears like a stuffed cushion spread on a cot and provided with a large pillow or *tákiá*; she is attended by armed male guards, and waiting maids holding *chauris*; but she has on her person nothing beyond a bead girdle to cover her modesty.* A

prince on one of the Amarávatí stones is seated on a high-backed, cushioned chair with what looks like a stuffed pillow behind him, but he has on his person little beside a cloth girdle two or three inches round the waist by way of dress. His ladies, seated on chairs without cushions or pillows, content themselves with only girdles of beads.† Occasionally the bead girdle is supplemented by a narrow slip of cloth attached to it and hanging behind, but not in front. In one instance in the same collection a Rájá and his little boy are dressed in *dhutis* reaching close to the ankles, but the attendant ladies are all in absolute *dishabille.*‡

In the garden scenes at Sánchi, the lovers always appear dressed, but in two out of four instances, the belles are nude, the other two being decently draped.§ Again, in a grand procession all the men are clothed and turbanned, and even the leading horse has a rich housing, but the ladies of the rájá, who look at the procession from the veranda and balcony of the palace, like the king's guards in a certain island in the South Pacific Ocean, whose full-dress consisted of a cocked hat and a pair of spurs, all confine their habiliments to a single article, a bead girdle amidst a gorgeous display of jewellery. One of them has a suspicious looking drinking cup in her hand, and a waiting maid is ready to replenish it from a covered flagon. It is worthy of note, that in some instances, women bear a large thick band of cloth round the waist, but it never reaches so low as the hip-joint. The so-called Dasyus, too, are everywhere represented as poor and degraded, but they are invariably dressed, and dressed decently enough for the position they occupy; but the women of the proud Aryans who despise them, and take

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* Tree and Serpent Worship, plate LXXIV.

† Ibid, plate XXXIII.

‡ Ibid, plate XXXI.

§ Ibid, plate XXXVII.

the lead on every occasion, though richly jewelled, are generally devoid of all clothing.

At Bhuvanes'vara the same scenes are by no means wanting; stuffed cushions shewing traces of buttons or tufting, which held the stuffing in its position, and large thick pillows *(takiás)*, such as are now held in requisition by men of rank and position, are repeatedly delineated, but the people who use them are mostly nudes. It must be observed also that in Sánchi and Amarávatí, perfectly nude males have been carefully avoided, and at Bhuvanes'vara are comparatively few, whereas the female figure is very largely exhibited in all the three places in a state of nature, without any artificial covering.

Had the nudity and spare clothing been due to race peculiarities, or tribal customs, they could not have been so markedly different among the two sexes. The habits and customs of the wild races now extant in different parts of the earth do not shew that where men and children have been clothed, the female sex has been left entirely without any garment. On the contrary, several primitive hill tribes in India and elsewhere, among whom the men and children go about without any covering for their persons, are particular in providing garbs of leaves or bark for their females; for there seems to exist, even among them, a sense of decency—a very imperfect and nebulous one, no doubt, formed after their very primitive conditions—but still a sense of decency about covering the person, which prompts them to devise the means of doing so. A notable instance of this is offered by Col. Dalton in his interesting work on the Ethnology of Bengal. Noticing the Juángs of Keunjhar, he says: "The females of the group had not amongst them a particle of clothing, their sole covering for purposes of decency consisted in a girdle composed of [illegible] beads from which depended before and [illegible] of

leaves. Adam and Eve sewed fig leaves together and made themselves aprons. The Juángs are not so far advanced; they take young shoots of the A'san *(Terminalia tomentosa)*, or any tree with young soft leaves, and arranging them so as to form a flat and scale-like surface of the required size, the sprigs are simply stuck in the girdle, fore and aft, and the toilet is complete. The girls were well developed and finely formed specimens of the race, and as the light leafy costume left the outlines of the figure entirely nude, they would have made good studies for sculpture. * * * * Next day they came to my tent at noon, and whilst I conversed with the males on their customs, language, and religion, the girls sat nestled together in a corner, for a long time silent and motionless as statues, but after an hour or two elapsed, the crouching nymphs showed signs of life and symptoms of uneasiness, and, more attentively regarding them, I found that great tears were dropping from the down-cast eyes like dew-drops on the green leaves. On my tenderly seeking the cause of their distress, I was told that the leaves were becoming dry, stiff, and uncomfortable, and if they were not allowed to go to the woods for a change, the consequences would be serious, and they certainly could not dance. It was a bright, dry day, and the crisp rustling, as they rose to depart, confirmed the statement."* The tears of the Juáng nymphs are remarkably expressive.

A similar instance is narrated by Lieutenant, afterwards Commodore, Lambert, in the voyage of one of Her Majesty's ships in the Pacific Ocean. The ship was at anchor close by an island inhabited by savages, who used the smallest possible amount of clothing "that could be made to serve the purposes of decency," and yet when they beheld the ship's crew jumping into the sea-water for

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* Dalton's Descriptive Ethnology of Bengal, p. 155.

a bath, without any clothing on their person, they were sorely scandalised.

Other instances it would be easy to adduce; but they are not wanted. Taking the facts here noticed into consideration I am led to the conclusion that as regards dress, the prevailing character of the bas-reliefs is due, not so much to ethnic, or social causes as to the exigencies of art. No doubt, the scantily clad Tamulian aboriginal races formed the great bulk of Buddhist congregations, and were more freely and plentifully represented on the monuments of their co-religionists than the Aryans, but their presence alone does not suffice to account for all the peculiarities noticed above. It is probable, therefore, that a conventional rule of art, such as has made the sculptors of Europe prefer the nude to the draped figure,* or a prevailing desire to display the female contour in all its attractiveness; or the unskilfulness of early art; or the difficulty of chiseling drapery on such coarse hard materials as were ordinarily accessible in this country; or a combination of some or of all those causes, exercised a more potent influence on the action of the Indian artist than ethnic peculiarities, in developing the human form in stone. There were, likewise, it is to be presumed, a sense of humour which manifested itself in oddities, caricatures, and grotesque representations, a longing for a display of variety, and a pruriency of imagination which made the males appear in dresses of diverse kinds, and the females in a state of nature. At Bhuvanes'vara a religious sentiment, that of veneration for the creative energy, of which some traits have been already noticed (p. 145) was evidently also brought to bear upon art, and to produce an effect highly offensive to good

* This is well illustrated in the nude statue of Achilles set up in honor of the Duke of Wellington, in Hyde Park, to the West of Apsley House, and in that of Charles II. in the great quadrangle of Chelsea Hospital, in which the "Merry Monarch" is dressed as a Roman commander.

taste. But whether so or not, it would, I think, be as effectual to draw conclusions regarding the costumes of the ancient Indians solely and exclusively from the sculptures they have left behind them, as it would be for the New-Zealander of Macaulay to do the same with reference to the Europeans of the 19th century from the collections of modern statuary in the Crystal Palace, the Kensington Museum, and the Louvre.

The argument would apply with equal force to the sculptures of the ancient Egyptians. The paintings and painted bas-reliefs of those people unmistakably show that the higher classes among them were well and sumptuously clothed from the neck to the ankles, and yet their statues and untainted sculptures entirely belie this. Kings, queens, high priests, and persons of rank appear in them with scarce anything better than rags to hide their nudity, and in many instances even those rags are wanting. The colossal statue of Minerva and that of king Asymandias at Thebes, have nothing more than each a strip of cloth from the hip to the middle of the thighs by way of dress.* The transparent clothing noticed by Mr. Fergusson at Sánchi, which hides no part of the female form, occurs almost everywhere in Egypt, and in some of her most finished carvings. Among the bas-reliefs under the gallery of the western temple in the Island of Philæ, in the sanctuary of the temple of Hormonthis and elsewhere, there are several figures of goddesses, or ladies of rank, seated on chairs, and decorated with rich head-dresses, and ornaments in profusion round the neck, but totally devoid of clothing round the waist. The attendants and the priests before them are all decently draped.† It would be as reasonable to argue from them that the ancient Egyptians were ill-clad as to deduce from the Sánchi ba-reliefs that the

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* Description de l' Egypte, vol. II., plates 22 and 28.

† Loc. cit., vol. I., plates 22, 27 and 96.

Hindus therein represented, *were a naked race.* *It is true,* as justly observed by *Carlyle, in his "Sartor Resartus," that* "by nature man is a *naked animal, and only in certain circum*stances, by purpose and *device, masks himself in clothes.*" *It* may be true, likewise, as *the same author endeavours to show,* that "the first purpose of *clothes was not warmth or decency,* but ornament";* and *taking it in that light, it must follow* that for decoration *man must have clothes, and when he had* once got them, his *passion for ornament* [illegible] [illegible]

[illegible]

[illegible]

Dasyus.

Mr. Fergusson has attempted to develope an ethnography of the races represented at Sánchi and Amarávatí from their costume; but the deductions he has drawn do not appear to be well-founded, since the dresses depicted are, as I assume, themselves not always complete representations of what they originally were when in use in a complete suit, and their evidence can go but little way to indicate the nationality of the figures on which they are placed.

This remark applies particularly to the class which Mr. Fergusson denominates "the Dasyus." They "are* generally represented as people of the woods, living in thatched huts, wearing a small *dhuti* wrapped round the waist, and possessing no ornaments. Their head-dress consists occasionally of a plain skull-cap, but frequently of plaited or matted hair wound round the head, and tied on the crown in a conical form. Occasionally they allow the hair to hang behind in loose tresses. Most of them have beards: a few appear with shaven chins. They sit with their knees raised and legs crossed and tied round with a strip of cloth or a napkin, and are occupied in splitting wood or other domestic task; occasionally navigating in rude canoes; but they never seem to mix with the community at large, except for the observance of religious rites." They have invariably by them a chaffing dish with a blazing fire, a pair of tongs, and a bowl, which, from its shape, appears to be made of the hard shell of the *gourd.* It was carried about hanging from the left hand. In one instance a man has a stand of the shape of a *mord,* over which he holds something, which appears to me, from the tracing of writing on it, to be a scroll or a mass of written paper; a companion of his is folding or unfolding a similar scroll or bundle, and a third is taking

* The remarks which follow on the Dasyus are quoted from a paper of mine published in the *Indian Antiquary* for February, 1872, pp. 36, *et seq.*

up some burning charcoal with his tongs. Mr. Fergusson, following General Cunningham, takes the first scroll to be a flagon from which the man is pouring something into his fire-pot, and the second a fan with which the owner is enlivening his fire; but the appearance of the scrolls and the position and action of the hands, according to several intelligent European gentlemen, including two professional artists, are entirely against this supposition. Mr. Fergusson himself half suspects them to be hermits, and says they are repeated in the Amarávatí sculptures, but attributes it to scarcity of Dasyus at the time.*

Some of these figures are repeated on the temples of Bhuvanes'vara. They appear old and emaciated, having by their sides a pair of tongs, a gourd pot, and a chaffing dish. The scene is scrupulously true to life, and may be found to this day, not only in every part of India, but even beyond it, and everywhere it represents an Aryan of the third order, *i. e.*, a hermit or ascetic *(Vánaprastha)* seated at his ease, reading his prayer book, or attending to his domestic occupations, and not a non-Aryan. Adverting to some of these hermits on the shores of the Caspian Sea, M. de Pauly observes: "Ou trouve en outre à Bakou quelques adorateurs du feu, dont la personnalité est particulièrement entéressante. L'aspect de ces feux perpétuels, sortant spontanément de la terre, offre un coup d'œil vraîment magique, surtout pendant la nuit; dans le voisinage de ces feux se trouve une sorte de temple ou de couvent dans lequel les derniers débris des antiques adorateurs du feu, représentés par quelques vieux Indous desséchés, presque nus, semblables à des fantômes ambulants, pratiquent sur eux-mêmes leurs macérations contre nature, et célèbrent leur culte idolâtre, triste et misérable parodie de la doctrine de Tserdouchit."†

* Tree and Serpent Worship, p. 208. † Peuples de la Russie, p. 145.

wood. Kálidása makes the sage Kanva live in a wood with about half a dozen maidens, including S'akuntalá, in his hermitage. Kás'yapa, in the same way, has his retreat full of women of different ranks, and a boy. Sítá is said to have lived in the hermitage of Vas'ishtha with her two sons who were born there; and almost every ancient story book has its tale of hermitages having feminine and juvenile residents. No doubt those works treat of avowed fictions, but it is not to be supposed that their authors outraged the sense of propriety of their readers by describing hermits having wife and children and female lodgers in their cells, if they had not found such things to be common in their times. The Vedas, the Upanishads, the great epics, and the Purāṇas, also describe sages, rishis, and munis having females about them; and the presence of such persons cannot, therefore, be taken as inconsistent with ancient Indian ascetic life.

Story of Dukúla and Piliyuk.

'The same practice also prevailed among the Buddhists, and priestesses of female mendicants—the Σεμναί of Clement of Alexandria—are frequently named in the Avadánas, the Játakas, and other legendary writings as living in woods. In Mr. James D'Alwis' translation of the *Attanagula Wansa* there is a remarkable instance of this. As the story there given is of importance, in connexion with the question at issue, and cannot readily be had for reference, I shall quote it entire.* It forms a part of the Sáma Játaka and runs as follows:—

"Once upon a time, when Piliyuk was king of Baranes, Gotama was born unto a hermit, named Dukúla, and was named Sáma. After the son had grown up, Dukúla and his wife Pariká went one day into the jungle in quest of roots and fruits. There they encountered a storm, and being much wet, were obliged to take shelter under a tree close to a hole

* Since the above was written the story has been separately published in England.

inhabited by a malignant serpent. Whilst the venerable pair were standing there, dripping from their garments, a cobra issued a venomous blast, whereby they were instantly struck blind. In this helpless condition their son discovered and conducted them home, and began to nourish and maintain them with the affection of a dutiful son. Some time afterwards the king went upon a hunting expedition, and rested on the banks of the Migasammata, not far from the hermitage. He had not, however, been long there before he saw the footsteps of deer that came down to the river to drink; and, thinking that he could kill them, lay in ambush. Immediately a remarkably handsome person with a pitcher came down to the river surrounded by a flock of deer. Amazed at the sight and wishing to ascertain whether it was a nymph of the forest whom he thus beheld, he issued a dart, which, alas! severely wounded him. In the agonies of death the wretched man put his pitcher by him, and, falling on the ground, began to exclaim, 'Who can be the enemy of a person that was devoted to the religious duties of the eight *s'ílas* and ten *kus'alas?* Who, indeed, could desire the flesh of an innocent person like myself?' Hearing these cries, the king approached his victim, proclaimed that he was Piliyuk, king of Baranes, explained the motive with which he had shot him, and desired to know who or what he was. Whereupon Sáma replied, 'I was born in this forest, I am the only prop and support of two parents, both aged and blind. Little do they know of the mishap that has happened to me. They will indeed be much grieved and distressed when they find me thus delaying. I alone gave them what they desired. Twice daily have I washed them, and thrice have I fed them. Who indeed will give them a drop of water even after asking ten times? They will be parched like fishes out of water. Who, alas! will succour and help those, who, probably, at this very moment, are anxiously waiting my return, and are

watching for the first sounds of my footsteps?' Thus lamenting, he began to weep, not for himself, but for the destitution in which he would leave his feeble parents. Horror seized the king at the reflection that his conduct was calculated to deprive of life three persons who had exercised the duties of Brahmachariya, and that he could not escape the torments of hell, if they all died; and, touched by the lamentations of the youth, he promised to succour and help his parents until his death. Sáma, relying upon his faithful promises, blessed the king, and, desiring him to convey his respects and the sad tidings of his death to his blind parents, closed both his eyes, and dropped down as if he had expired.

"Instantly a goddess named Bahusodarí, who had been Sáma's mother in his tenth birth before the present, perceiving the danger to the hermit boy and also to his parents, as well as the king, made her appearance on the spot; and, after rebuking the king for his conduct and advising him how he should behave towards Sáma's parents, watched over Sáma.

"The king, sorely afflicted with grief, picked up the pitcher which had been filled up by Sáma, and, taking the path which had been directed, reached the humble cottage of the blind pair, who sat anxiously watching the return of their son. They now heard the sound of advancing footsteps, but, knowing that they were not those of their son, inquired, 'who approached the door?' The stranger announced that he was Piliyuk, the king of Baranes; and entered with them into a conversation, in the course of which he delicately disclosed their son's fate and the particulars connected with it, offering at the same time to succour them through life. Unbounded was now the grief of the hapless parents, to which they gave utterance in the language of despair, falling down, and each bitterly crying, 'Oh son Sáma, from the day I have lost my sight, have I, by thy unceasing attentions, felt that

I have acquired divine eyes. Where hast thou now gone? How shall I henceforth live? Son, thou hast never done nor conceived any evil towards us, or any other being. Thou hast never uttered a falsehood. Thou hast never committed life-slaughter; ever hast thou maintained the observance of the *pancha s'ila.*'

The king tried his utmost to console them, but without success. Afterwards, turning to the king, the blind parents addresed him, saying, that they had no faith in his proffered protection, and that all the favour they desired was to be led to the place where Sáma lay. The king complied by leading the point of a stick which the blind ones held in their hands When they reached their destination, the bereaved parents again gave vent to their feelings by much weeping, and praying to their titular god. The mother, on examination, finding that all signs of life had vanished, gave utterance to the following *Satya Kiriyá* :—'If it be true that my son Sáma unceasingly devoted himself to the duties of Brahmachariya, and that he has ever maintained the ordinances of the *Attha s'ila*; and if it be also true that I have entertained no other faith except Buddhism, and that I have ever performed *tilakunu Bhavana*, may, by the power of those truths, my son receive life.' By the influence of this *Satya Kiriyá*, and by the might of the gods, Sáma moved from one side to another. When the father had also uttered a similar *Satya Kiriyá*, Sáma again moved to a side; and by the power of the goddess already named, he revived, and the parents received their lost sight. Instantly the morning sun arose, and Sáma dismissed the astonished king, after preaching to him on the merits of nourishing one's parents, and, above all, of leading a religious life, as they were testified to by his miraculous restoration to life."*

'This story will no doubt appear as a Buddhist adaptation of the anecdote of Das'aratha and the blind sage Andhaka as given in the Rámáyaṇa; but it has been reproduced

* *Attanagula-wansa*, pp. 167, *et seq.*

in stone on the standing pillar of the Western Gateway of the Sánchi tope, and we see in it Gotama as Sáma wounded by the king, and his parents, the hermit and his wife, dressed in the same garb which has been assigned to the Dasyus. According to the Játaka, Sáma recovered from his wounds, and was restored to his parents, as is shown in the sculpture. The Rámáyaṇa kills the boy, and sends his parents to the funeral pyre, to immolate themselves.

The following is Mr. Griffith's version of the Rámáyaṇa story as related by the king to the blind hermits :—

"High-minded saint, not I thy child,
"A warrior, Das'aratha styled.
"I bear a grievous sorrow's weight
"Born of a deed which good men hate.
"My lord, I came to Sarju's shore,
"And in my hand my bow I bore
"For elephant or beast of chase
"That seeks by night his drinking place.
"There from the stream a sound I heard
"As if a jar the water stirred.
"An elephant, I thought, was nigh :
"I aimed, and let an arrow fly.
"Swift to the place I made my way,
"And there a wounded hermit lay
"Gasping for breath : the deadly dart
"Stood quivering in his youthful heart.
"I hastened near with pain oppressed :
"He faltered out his last behest,
"And quickly, as he bade me do,
"From his pierced side the shaft I drew.
"I drew the arrow from the rent,
"And up to heaven the hermit went,
"Lamenting, as from earth he passed,
"His aged parents to the last.

"Thus unaware, the deed was done:
"My hand, unwitting, killed thy son.
"For what remains, O, let me win
"Thy pardon for my heedless sin."*

'Mr. Fergusson has published this scene in his great work (plate XXXVI.), but he says that "it represents, one of those transactions between the Hindus and Dasyus which have probably only a local meaning, and to which, therefore, it is improbable we shall ever be able to affix a definite meaning."† To those, however, who are familiar with the story of the Rámayaṇa and the Játaka, the improbability will give place to unmistakable certainty, the only difficulty being the presence of a companion of the king in the scene of action, due probably to the Buddhist version having included such a personage in the tale whose name has been omitted in Mr. D'Alwis' abstract, as unimportant. According to the Rámáyaṇa, the king went to the wood in his car and was attended by his charioteer. General Cunningham takes the blind hermits to be ascetics, and observes, "I am unable to offer any explanation of this curious scene, but it may possibly have reference to some event in the early life of S'ákya."‡ Mr. Fergusson appeals to the scene as an evidence of the Aryans or Hindus having formerly indulged in the wicked pastime of shooting the inoffensive Dasyus; but if my identification be correct, the inference will of course lose its *only* foot-hold.

Domestic Duties of Hermits.

'Exception might also be taken to my identification of the so-called Dasyus with such hermits on the ground of its being inconsistent for such people to engage in domestic and pastoral occupa-

* Griffith's Rámáyaṇa, II., p. 249. Compare with this another version in his *Specimens of Old Indian Poetry*, p. 12.

† Tree and Serpent Worship, p. 138,

‡ Bhilsa Topes, p. 225.

tions. But the laws of Manu do not at all prohibit such pursuits. On the contrary they ordain that the retired hermit should not only live in a hut and go about dressed, but even horde food sufficient to last for a year. He should also provide means for the performance of various rites and ceremonies, make oblations on the hearth with three sacred fires, not omitting in due time the ceremonies to be performed at the conjunction and opposition of the moon, and also to "perform the sacrifice ordained in honour of the lunar constellations, make the prescribed offering of new grain, and solemnize holy rites every four months, and at the winter and the summer solstices."* Nothing has being said by Manu as to the propriety or otherwise of ascetics keeping cattle, but the epics and the Purános clearly show that the ancient sages were partial to milk, and the saintly character of Vas'ishṭha was not in any way opposed to his keeping the famous cow Nandiní. The rites enjoined them could not be performed without an ample supply of milk. The Buddhist ascetics, likewise, lived in huts, and not seldom collected money enough to dedicate images and topes built at their cost. During their four months of *Wasso* fast, they lived in monasteries together with their religious sister-hood.

Worship of Nágas.

'Some of the hermits in the Sánchi bas-reliefs are engaged in worshipping the five-headed Nága; but as the Hindu recognised in it an emblem of the sempiternal divinity Ananta, and the Buddhist, a race of superhuman beings, worthy of adoration, devotion to it would not be by any means unbecoming a hermit, who is required to observe all the necessary regular and periodical rites and ceremonies.

*Features of Dasyus.*

'The last and most important argument of Mr. Fergusson in support of the non-Aryan origin of the Dasyus is found

* Mánu VI., 9—10.

features; but in Sánchi the figures are generally so small, so rough, and so weatherworn, that their indications of the aboriginal broad face and flat nose cannot be relied upon. That the appearance of youth, and beauty, and rank, and wealth, should be different from age, decay, decrepitude, and squalid poverty, is a fact which none will question, and therefore what are taken in the sculptures for ethnic peculiarities, may be entirely due to a desire to mark the distinctions of condition.

Origin of the word Dasyu.

'It may be added that the term Dasyu itself is Aryan and indicates an Aryan, and not a non-Aryan, race. According to Manu, "all those tribes of men who sprung from the mouth, the arm, the thigh, and the foot of Brahmá, but who became outcasts by having neglected their duties, are called Dasyus or plunderers."* And the designation, therefore, fails to convey the idea which the learned author of the History of Architecture wishes to attach to it. At Bhuvanes'vara Purí, and Koṇárak, some of the statues (not of Dasyus) are from four to five feet high, and many of the statuettes and bas-reliefs are from eighteen inches to three feet in height, and their faces, contour and style, as already stated in the preceding chapter, are of an Indo-Aryan caste.

Coiffure.

Next to clothing for the body, the arrangement of the hair or the decoration of the head, forms the most important element of dress. It has in all ages and in every state of society engaged particular attention, and among savages has often had precedence of most other modes of ornamenting the person. With females, it has been a subject of the most earnest solicitude, and the extravagance to which they have been led in this respect under the fascinating sway of fashion has often been made the subject of keen satire, of unpitying

* Manu, X. 45.

ridicule, and severe reproof. But the lashings of the wit and the anathemas of the moralist, have invariably proved too weak to set the hair of the head, the loveliest ornament bestowed by nature on the human form, free of unnatural restraints and the most grotesque disfigurements. The glossy ringlets of a young lady drooping gracefully in their native luxuriance, is a style too genuinely beautiful and natural to be let alone by art; and in their place, therefore, the fair sex has everywhere resorted to the most extraordinary, the most extravagant, and the most fantastic contrasts conceivable. In Europe braids and plaits steeped in oils, pastes and pomades, or the tower, the commode, and the chignon of outlandish piles of borrowed hair powdered and curled and bolstered up with bows and pads and basket frames, have always reigned in some form or other; and in India they seem to have exercised their potent sway with no less vigour and influence.

Even in the early days of the Rig Veda, the arrangement of the hair was a subject of concern, and peculiarities were often noted. Thus, Rudra is praised as having braided hair *(Kapardí)*.* Pushá, in the same way, has a braid on his head,† and the epithet is, likewise, applied to the Tritsus‡ In the tenth Mandala, a young-female, handsome and brilliant, is said to wear four of these braids, "*Chatushkapardá yuvatih supes'áh ghritapratíká vayunáni vaste*," and in VII. 33—1, the priests of the family of Vas'ishtha are said to wear four of these braids."||

The Rámáyana and the Mahábhárata contain frequent notices of the braid, and of the neglect of the coiffure as a mark of grief, or violent excitement. Draupadí, when insulted by Dus's'ásana in open court, resolved never again to dress her hair until Bhíma should keep his promise, and tie it up with

* Wilson's Rig Veda, I., 301.
† Ibid, III., 496.
‡ Ibid, IV., 171.
|| Muir's Sanskrit Texts, V., 462.

his hands reeking in the blood of the offender, and had her resolution carried out after the lapse of thirteen years. According to the Rámáyaṇa, a single braid was the most appropriate mark of anguish for women during their separation from their husbands, and the Yaksha, in the Meghadúta, is all anxiety to—

" ——— Urge his trembling fingers to unbind
The mourner's braid of hair for his long absence twined."*

Manu lays down rules for the tonsure, and the different modes of arranging the hair on the crown of the head proper for different orders of the people.† Later Sanskrit authors are profuse in their praises of the various forms of coiffure in vogue in their times ; but their descriptions are not precise, and it is not always easy to make out the forms they allude to. This is, however, not much to be regretted, as the available sculptural evidence on the subject is ample. The artists of Orissa seem to have paid particular attention to the subject, and their works represent the dressing of hair and head-dresses in great variety. The specimens shown in the annexed woodcuts, Nos. 37 to 48, will convey some idea of the forms which the Uriyás, twelve hundered years ago, thought the most attractive and elegant.

Dressing of the Hair in Sculpture.



No. 37.

The simplest and most natural of these was the chignon represented in No. 37, taken from the Great Tower of Bhuvanes'vara. It occurs on a great number of heads, and is generally ornamented with a shieldlike boss of gold on the coil, and three double strings of pearls or gold chains on the head. It still prevails in Orissa and in some parts of the Southern Presidency, where the dancing girls seem particularly attached to

* Griffith's Scenes from the Rámáyana, p. 177. † Manu, II., 27, 35, 65.

it. From its bulk, it is evident that some padding, or stuffing, or a profuse admixture of false, or borrowed, hair was used to swell it out. In the present day, bits of rag, or braided strings of false hair, are the stuffings commonly resorted to. No. 38, from the Temple of Muktes'vara, offers a variety of this form in which the ornaments are replaced by a single string of pearl encircling the head like a fillet, and the chignon proper has two gradually receding tiers of hair placed over it. In front two thick locks are made to curl upwards on the temples. On the Great Tower, several male heads have the same style of chignon, but without the curls. The next most common form is shewn in No. 39. It resembles the modern European chignon as copied in No. 40 from a plate of Parisian fashions in the *Illustrated London News* for 1867, so closely in its make and outline, that little need be said to describe it. It is worthy of remark, however, as affording a notable instance of how fashion repeats itself even under such dissimilar circumstances as those of Orissa in 667 and of Europe in 1867, A. D., and how little taste as regards chignons in the boudoirs of Paris in the present day, differs from that of the belles of Cuttack twelve hundred years ago. A form very similar to it was in vogue in Bengal in the last century; but it has been altogether discarded now. Some male figures at Bhuvanes'vara have head-dresses of a similar, but not exactly the same, form. The chignon of Annapurná at Muktes'vara, (woodcut No. 31) p. 182, is peculiar, and seems to have been uncom-



No. 38.



No 39.



No. 40.

mon. There are some loose curls on the left temple, the counterparts of which are not to be seen on the opposite side. The style shewn in No. 41 was common enough. Its great peculiarity is that the chignon, instead of being placed behind the head, is brought, to the left side, and made to rest on the shoulder. It is tied across by a jewelled band having a pendant star on each side. A fringe of short hair covers the upper part of the forehead, and upon it is set a triangular tiara of jewels. In the Rig Veda the descendants of Vas'istha are described as wearing their chignons sideways, but in their case the right side was preferred.* In the present day many Europeans must have noticed Madrasi ayahs with their coil of hair on the left side, and the dancing girls of Oudh, until very recently patronised the same fashion. Woodcut No. 42, exhibits a modification of this style. The hair in it is parted into two coils, and placed on the two sides, leaving the occiput flat. This is common both to men and women. In No. 43, the true chignon disappears, and is replaced by a fantastic cone, curling and twisting upwards behind the head; and the form is further modified in No. 44, in which the ... tied by a jewelled band two or three inches from ... the head, ... ded into



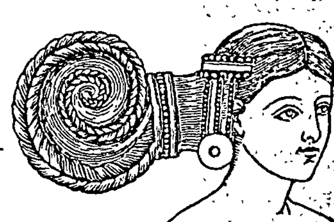
No. 41.



No. 42.



No. 43.



No. 44.

* "The white-c... s of h... the lock of hair on the ri... d... s Rig

an enormous ball about two-thirds the size of the head. To preserve these coiffures undisturbed, the ladies who patronised them, must have abjured reclining as long as it was necessary to keep them in position.

Passing over a great number of modifications of these styles, of which no drawings have been taken, I come to woodcut No. 45, in which the coiffure is raised to an angle of 50 degrees, and tied round by a string of pearls Upon the coil is a round button-like protuberance, but whether of hair or metal, it is difficult to make out. The forehead is encircled by a tiara.



No. 45.

This form, without the tiara and button, may still be seen among the poorer classes of Uriyás, and the figures on which they have been seen, occupy positions which indicate that formerly it was likewise confined to the *lower orders of the people.*



N. 46.

The transition from an angle of 50° to the crown of the head was easy, and the forms in which the hair was arranged there were various. The most common, and perhaps the most graceful of its kind, is shown in woodcut No. 46. It has much the character of the military forage cap which was in use until the first quarter of this century, with the cheek strap passing across from the forehead backward. The strap is edged with two strings of pearls or beads, and has a metal button on the top. The brow has a double string of pearls with a star in the middle and an ornament on each side very much like a peacock's crest. Judging from the character of the figures on which it occurs, I am disposed to think that this style was in fashion among the frail sisterhood of ancient Orissa. The lady shown in Illustration No. 58 of my "Antiquities of Orissa," has no strap, and onl.

one string of pearls on her brow; the upper coil of her chignon is larger and made of hair. Her male companion has his hair tied in the same way, but it being short, is seen curling into a mass on the top of the tie. A modification of this style may be seen in woodcut No. 47, where the strap and crests are omitted, the pearls are replaced by a tiara, and the hair is entwined with oblique courses of what, in the present day, in India is gold lace or embroidered ribbon. Woodcut No. 48 represents another modification in which the central coil is reduced in size and raised considerably above the crown, and the crests are supplanted by curling masses of hair. Illustrations Nos. 59, 60, 62, and 64, of my "Antiquities of Orissa," show other variations of fashionable coiffure, and illustrations Nos. 63 and 83 such as are appropriate to gods and goddesses.



No. 47.



No. 48

In some cases the hair, instead of being massed into a ball or coil of some kind or other, is allowed to hang in loose masses on the back,* or woven into one or more braids and allowed to hang behind, very much in the style common in Persia and Turkey. Occasionally the outermost plaits are allowed to fall behind the ears and float on the breast. Sanskrit poets are fond of dwelling at great length on the charms of these braids, but with a sad want of gallantry, or



No. 49.

* At Amarávati, Mr. Fergusson notices a comb behind the head to hold these loose masses of hair-together, but it has not been met with at Bhuvanes'vara.

with a silly poetical conceit, they generally compare them to hissing serpents. In woodcut No. 49 these braids are twisted into six rays, and kept in an erect position by waxing and enclosing sticks or wire within them. A fringe of short hair covers the brow, and on it is placed a triangular tiara with a crest. In woodcut No. 50, the rays are greatly multiplied and arranged in a double row, and the tiara is provided with three crests. Both these are taken from the figures of goddesses. Woodcut No. 51, likewise, represents the head-dress of a goddess. In it the hair is disposed in the form of a hemispherical casque over the head, then tied round by a band and crest, and the end is made to arch over backwards in three separate masses like the horse-hair plumes of a Grecian hero. The head of Kártikeya in the Great Tower of Bhuvanes'vara is coiffed in the same way, but without the tie in the middle, in excellent keeping with his martial character as the acknowledged great god of war, though he occupies the position of a lieutenant of S'iva. Woodcut No. 52, is *sui generis*. In it the hair is disposed in curling horizontal bands on the two sides of a long upright crest rising from a jewelled tiara.



No. 50.



No. 51.



No. 52.

The ordinary rule regarding warriors and athletes, however, is not to have knots or chignons, but to cut the hair close, and to represent it in a thick, short, crisp slightly curled state, the effeminate chignon

and knot being reserved for common people, and especially for beaus and men of pleasure. This effeminacy still exists among some Uriyás, and in Bengal it was not unknown at the beginning of this century, though the more common style among men of fashion was long curling locks hanging down to the shoulders. This was very like the ancient Greek style, which Miller describes as consisting of "expanding hair curling down over the cheeks and neck in long curved lines," and which "was regarded as the sign of a soft delicate nature."*

In the various styles of dressing the feminine hair, there is one peculiarity worthy of special notice,—it is the want of the parting of the hair along the mesian line from the forehead backwards. This parting is regarded by modern Hindu women as a special mark of married life, and no Bengali lady who has her husband living, will, on any account, allow this to be disturbed. Constantly parting the hair at one particular spot, and tying the locks of the two sides tight away, often lead to baldness along the middle line; but the dread of widowhood is too strong to override the custom. This peculiar style of parting is well known in Europe in the present day, and may also be noticed in many antique female heads. For the demi-monde and dancing girls the Alexandrine style of combing back the hair without any parting is the most favourite fashion.

Turbans and Caps.

Where the body is generally nude or ill-clothed, it is not to be expected that much will be seen on the head besides the hair; but examples are not wanting of various kinds of caps, turbans and other ornaments for the head. Turbans are rarely seen at Bhuvanes'vara, though this part of the male dress was held in considerable esteem in India, and frequent mention of it is made in Sanskrit writings. Under the name of *Ushṇis'a,*

* Miller's Ancient Art and its Remains, p. 334.

it is alluded to in the Atharva Veda,* and in the Lalita Vistara, the Bodhisattva, when appointing Maitreya to the Viceregency of Tushita, placed, by way of investiture, his own silk turban on the head of his deputy.



Nos. 53.

In the bas-reliefs of Sánchi and Amarávatí, a great many varieties of it are represented. Woodcuts Nos. 53, 54, 55, and 56, are taken from the temples of Bhuvanes'vara, and show the turban as worn by durwans and sannyásis. The forms differ in no respect from those in common use in the present day. Caps too are not of frequent occurrence. There are, nevertheless, several specimens of rich caps which are worthy of notice. One in the Temple of Vaitál Deví is very like the forage cap which was in common use by officers in the English army until the beginning of this century. A brocaded specimen of it occurs on the head of a dancing girl in the same temple. (Woodcut No. 57). Caps of various kinds may also be seen in the bas-reliefs of Sánchi, Amarávatí, and Udayagiri. The modern bridegroom's light-wood crown, the *topar*, is common everywhere.



Nos. 54.



Nos. 55.

Beard.

The turbaned figures are all bearded, while those of men of rank and position are all smooth-chinned. In fact, the practice of cultivating the beard has never been in fashion among the ancient Hindus, and even among the earliest Aryans of the Vedic times, the razor†

* Muir's Sanskrit Texts, V., 462.

† "Sharpen us like a razor in the hands of a barber." Wilson's Rig Veda, IV., p. 233.

"Driven by the wind, Agni shears the hair of the earth like a barber shaving a beard." Rig Veda Manḍala X., 142—4.

and the barber were in every-day requisition. It is true that certain days of the week, particularly Saturdays, and certain constellations, are reckoned inauspicious ; but this is overridden by the ordinance which requires that all vows, fasts, and s'ráddhas, should be preceded by shaving and paring of the nails, the penalty for the wretch, who neglects it "being a sojourn in the next life for twenty days or twenty years in a vat full of hair and nails, during which he has to eat nails and hairs, and be constantly beaten with a stick."* The ordinary practice of householders is to shave frequently, not unoften every day. In this peculiarity the Hindus closely resemble the ancient Egyptians, who, says Herodotus, "only let the hair of their head and beard grow in mourning, being at all other times shaved." "So particular, indeed, were they on this point, that to have neglected it was a subject of reproach and ridicule ; and whenever they intended to convey the idea of a man of low condition, or a slovenly person, the artist represented him with a beard. "It is amusing to find," adds Sir Gardener Wilkinson, "that their love for caricature was not confined to the lower orders, but extended even to the king : and the negligent habits of Rameses VII. are indicated in his tomb at Thebes, by the appearance of his chin blackened by an unshaven beard of two or three days' growth."†



No. 56.



No. 57.

* व्रतानामुपवासानां श्राद्धादीनां च संयमे ।
न करोति चौरकर्म्म अशुचिः सर्व्वकर्म्मसु ॥
स च तिष्ठति कुण्डेषु नखादीनां च सुन्दरि ।
तदेवदिनमानाब्दं तद्भोजी दण्डताडितः ॥
इति ब्रह्मवैवर्त्ते प्रकृतिखण्डे २७ अध्यायः ॥

† Ancient Egyptians, III., p. 357.

The ancient Greeks and the Romans entirely differed from the Hindus and the Egyptians in this particular. The Romans cultivated the beard until the year 299 B. C. when P. Ticinus Mena, having brought barbers from Sicily, introduced the custom of shaving at Rome, and, as Pliny states, "Scipio Africanus was the first Roman who shaved every day."* The Greeks, down to the time of Alexander the Great, failed to appreciate the comfort and cleanliness of a shaved chin, and on that account were held in such abhorrence by the Egyptians, who followed the cleanly Indian custom of shaving that, according to Herodotus, "no Egyptians of either sex would on any account kiss the lips of a Greek, make use of his knife, his spit and cauldron, or taste the meat of an animal which had been slaughtered hy his hand."† Among Indians, sages, hermits, and men who had renounced the pleasures of the world, as also men in mourning, kept it as a mark of penance like the Egyptians‡ and the Jews,§ and unlike the Greeks, who shaved on those occasions. The bearded Hussar officer who is so irresistible among the lasses in Europe, would have found scant chance among the damsels of India, who seem to have detested the beard, and to account for the blindness of Dhritaráshtra, a story is told in the Mahábhárata, in which a lady closes her eyes at the sight of her brother-in-law in a beard.

Shoes and Boots.

Of ancient shoes, I have met with only one variety, the slipper with a slightly upturned front, but all the carvings of it that have come to my observation were, owing to their small size, and the decay of ages, so indistinct that I have not been able to take any drawing that would be worth having. In my Antiquities of Orissá, vol. I. plate XXIII. fig 87, shows the only

* Pliny, VII., 59, apud Wilkinson's Ancient Egyptians, III., 359.

† Herodotus, II., 41 and 91. ‡ Ibid. II., 36; and III., 12.

§ Genesis, xii. 14.

specimen which I could clearly make out. Two or three pairs of pattens, *khadams*, seen were also in the same predicament. It is probable that in India these articles of dress were held in about the same requisition formerly as now; but that they were well-known and in common use by all who could afford to get them, is evident from there being more than one Sanskrit name for them. The circumstance related in the Rámáyaṇa of Bharata's placing on the vacant throne of Ayodhyá a pair of Ráma's slippers, and worshipping it during the latter's long protracted exile, shows that shoes were important articles of wear, and worthy of attention. The episode on the subject is one of the most affecting in the Rámáyaṇa, and displays to perfection the mastery with which old Válmíkí, the Homer of India, touched the tenderest chords in the heart of his reader.* In Manu and the Mahábhárata, the slippers are also mentioned, and the time and mode of putting them on pointed out; and

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* When Ráma expressed his firm resolve not to return home, even were "the cold to forsake the Hills of Snow, and the Ocean to retire from its shore," Bharata said—

"Put, noble brother, I entreat,
"These sandals on thy blessed feet:
"These, lord of men, with gold bedecked,
"The realm and people will protect."

Adding—

"Through fourteen seasons will I wear
"The hermit's dress and matted hair:
"With fruit and root my life sustain,
"And still beyond the realm remain,
"Longing for thee to come again.
"The rule and all affairs of state
"I, to these shoes, will delegate.
"And if, O tamer of thy foes,
"When fourteen years have reached their close
"I see thee not that day return,
"The kindled fire my frame shall burn."

Griffith's Rámáyaṇa, II., p. 453.

mediæval Sanskrit authors allude to them pretty frequently. The Vishnu Puráṇa enjoins all who wish to protect their person, never to be without leather shoes.* Manu, in one place expresses great repugnance to stepping into another's shoes, and peremptorily forbids it,† and the Puráṇas recommend the use of shoes when walking out of the house, particularly in thorny places, and on hot sand. Arrian says: " They, the Indians, wear shoes made of white leather, and these are elaborately trimmed, while the soles are variegated, and made of great thickness, to make the wearer seem so much taller." (M'Crindle's translation, p. 220.) This description would be true to the letter of the Uriya shoe of the present day, though I am not prepared to say that the object of the thick soles was really the same with that of the heels in the tiny boots of European ballet girls.

In the "Toy Cart" of S'udraka, which dates from the first century before Christ, the mother of a rich courtezan is described as arrayed in flowered muslin with her feet thrust into a pair of slippers,‡ showing that in ancient times, as in the present day, women of the town were in the habit of wearing shoes. Whether family women ever used them I have not yet been able to discover; but there is no text forbidding such use that I am aware of.

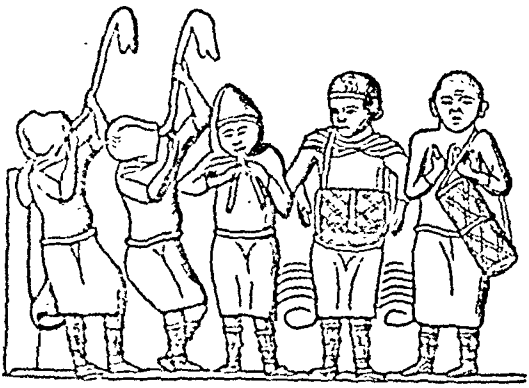
At Sánchí there is a corps of musicians dressed in kilts, and wearing sandals, tied to the leg by crossed bands, very much in the same way in which the ancient Grecians fastened their sandals. Nothing similar to them has any-

* पर्यटेत्पादिके छत्री दण्डीरात्र्यटवीषु च ।
शरीरत्राणकामो वै सोपानत्कः सदा व्रजेत् ॥
Vishnu Purána, Book II., chap. 21.

† Manu, Ch. IV. 66.

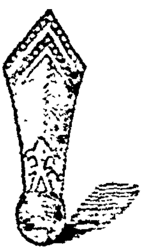
‡ *Maitreya.*—"And pray who is that lady dressed in flowered muslin, goodly person truly; her feet, shining with oil, thrust into a pair of slippers? she sits in state on a gorgeous throne "

*Att.* "That is my lady's mother." Wilson's Hindu Theatre, II, p. 87.



No. 58.

where else been noticed in India. (Woodcut No. 58.) The boots at Udayagiri, reaching up to the knee, have been already alluded to, and I have seen several specimens in other parts of India. Woodcut No. 59 shows a boot taken from a figure of Súrya found near Surajpokhar in Behar, which, from the circumstance of the worship of Súrya, a Vedic divinity, having become obsolete for over a thousand years, I believe to be about twelve hundred years old. *Its top is cut aslant like that of a Hessian* boot, and the rim is decorated by a border of lines and dots, the Udayagiri specimen having the top plain and evenly cut like that of a Wellington boot. Woodcut No. 60 is from an attendant of this Súrya, and differs from the last in having the whole of the leg part of it ornamented by oblique lines, leaving the foot plain. A second image of Súrya, found in the same locality and of about the same age, shows a bootee, or something like a ploughman's highlow, covering about one-third of the leg, and having both its leg and foot parts marked with diagonal lines: it resembles very closely the side-spring boots of the present day, but without the springs. (Woodcut No. 61). On another figure of Súrya, found near Murshidábád, which, judging from its material and make, I take to be of about the same age as the preceding two, there is a boot, the



No. 59.



No. 60.



No. 61.

top of which has a Vandyked edge marked with double lines. (Woodcut No. 61). The desecration of this figure by a European, lately formed the subject of a criminal prosecution in the High Court of Calcutta, and it was then brought to light that its true character was unknown to the people, and that it was worshipped as an image of Vishnu. A sixth style is to be seen on the temples of Kedáres'vara and Muktes'vara as also on the back frame of the Murshidábád Súrya, and in it the top is so cut as to leave a flap like the Napoleon flap projecting in front and another behind, the sides showing triangular notches. This boot is also remarkable from the circumstance of its being worn by a lady: her lover has boots of the same kind Curiously enough the figures on which these boots have been found are all dressed in *dhutis*, having the upper part of the body bare.



No. 61.

None of the boots shows any marking for the sole or heel, and so they may be taken for moccasins, or buskins without the cork soles which were used to add to the height of actors on the Grecian stage. That the boots or buskins under notice are genuine Hindu articles of dress, and not borrowed from foreigners is evident from their having been known from very ancient times. Pánini notices a variety of boots which covered the whole of the foot and was tied at the ankle. Its name is *anupadíná*. It must have been common enough at the time to serve as an example for the illustration of a rule in grammar, and already so old and familiar as to have lost its radical derivation in the mazes of antiquity.* Amara Sinha describes it as a kind of shoe that covered the whole of the foot, *Padúpanat strí saivánupadíná padáyatá*, and most of his commentators, who lived after the advent of the Muhammadans in this cou

* ५।२।६। अनुदायामि माढग्रे या अनुपदवद्धा अनुपदीना उप·

explain it by reference to the familiar Persian boot called *mujáh: mojá iti khyátáh.* Paṇḍits of the present day, finding that in India the word *mujáh* is used for stockings or socks, suppose that *anupadíná* means that article ; but neither the interpretation of Amara, nor the original meaning of the Persian word supports their inference. Bharata Mallika says that it was an ankle-boot: सैवो उपानत् पदायता पदायामप्रमाणाचेत् अनुपदीना मोजा ख्याता स्यात्। गुल्फादिसहितमशेषपदं अनुपदं, साकल्ये अव्ययीभावः। अनुपदं व्याप्नोति अनुपदीना। In the *Amarakosha-málá* of Paramánanda, we read सैवोपानत् पदसमानायता दीर्घा चेत् अनुपदीना पदस्य तुल्यायामं स्यात् अनुपदस्य तुल्यायामं स्यात् अनुर्यस्य चायाम इत्यव्ययीभावः। As. Soc. MS. 448, fol. 412. That the Persian *mujáh*, when first introduced into India, was a boot or buskin, *i. e.*, an outer leather covering for the foot, is evident from such phrases as موزه در گل ماندن "to have one's *mujáh* stuck in clay" *i. e.*, being under a difficulty—موزه نهادن "to put forth the *mujáh*" for proceeding on a journey, having become idiomatic and proverbial in the Persian language. The last is equivalent to the American slang "pull-foot," which again is a Yankee version of the "ἀναίρων ἐκ δωμάτων ποδά" of Euripides. Had the *mujáh* meant a sock, or an inner covering protected by outer leather shoes, it could never have been used for starting on a journey.

The material for these boots and shoes was ordinarily bovine leather, and even the hide of the sacrificed cattle was not excepted. According to S'áñvatya quoted by A's'valáyana, the hide of the cattle sacrificed at the *S'úlagava* ceremony, was fit to be converted into shoes and other useful articles.* In a Vedic verse quoted by Sávara S'vámí in his commentary on the Mímáñsá aphorisms, mention is made of hog-skin as a fit material for shoes. *Várálú Upanahau* I. p. 70.

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* भोगं चर्म्मणा कुर्वीतेति शांवत्यः। ४।८।२४। शांवत्यस्त्वाचार्य्यः चर्म्मणा भोगमुपानदादि कुर्वीतेति मन्यते।

Ornaments.

The passion for personal ornaments and decoration is common to every state of society. It may have been chastened and modified under particular circumstances, but it has never and nowhere been altogether suppressed. The jackdaw's feathers and cowrie-shell necklets of some of the Pacific islanders may have been replaced in the boudoirs of Paris and the drawing-rooms of England by the magnificent plumes of the ostrich and brilliants of unrivalled lustre, and in Asia by the pinions of the bird of paradise and orient pearls of exquisite perfection, but the desire for them remains the same, and equally ardent everywhere. It is not remarkable, therefore, that it prevailed to an inordinate extent in ancient India, under conditions, climatic and social, the most favourable to its growth. To judge from the records and relics now accessible, the passion seems to have manifested itself in an inordinate fondness for gold jewellery for different parts of the body, and the deities of the Rig Veda constantly present themselves adorned with a variety of them. Rudra is described as "firm with strong limbs, assuming many forms, fierce and tawny-coloured, shining with brilliant golden ornaments,"* and wearing "an adorable, uniform necklace." The Maruts decorate their persons "with various ornaments;"† "they are richly decorated with ornaments;" and "shining necklaces are pendant on their breasts."‡ The As'vins are also adorned with golden ornaments. The Asuras, like their rivals, had, likewise, plenty of "gold and jewels,"§ and human beings, whose ornaments were no doubt the prototypes of their celestial counterparts, were certainly not without their due share.

Accordingly we find the sage Kakshivat praying for a son "decorated with golden earrings and jewel necklace;"‖ and

* Wilson's Rig Veda II. 221.
† Ibid II. 179
‡ Ibid IV., 124—298.
§ Ibid I. 91.
‖ Ibid II. 6.

among largesses to priests and Bráhmaṇs, gold in lumps or in ornaments, is prominently mentioned. In the Nirukta of Yáska and the grammar of Páṇini, not only ornaments, but names of various kinds of them, are enumerated, and Manu defines the nature and duties of the caste whose especial vocation was to manufacture them, and the punishment meet for fraudulent adulteration of gold. The old vocabulary of Amara Siñha gives names for crowns, crests and tiaras for the head; of rings, flowers and bosses for the ears; of necklaces of one to a hundred rows, and of various shapes and patterns; of armlets and bracelets; of signet and other rings for the fingers; of zones and girdles for the waist for both men and women; as also of ornaments of bells, bands and chains for the leg and ankle.

Although fashion has rendered the forms of many of the ancient ornaments now obsolete, most of the names are still current in connexion with their substitutes, and the sculptures of Bhuvanes'vara afford us a pretty fair idea of what their shapes were twelve hundred years ago. The bas-reliefs of Sánchí and Amarávatí also exhibit specimens of a great variety of ornaments for the hands, feet, waist, neck, and head.

In the absence of positive information regarding the ethnography of the peoples represented in these three places it would be wrong to take the ornaments shown as illustrations of the jeweller's art as extant among a single race from the second or the first century before Christ to the seventh century of the Christian era; but taking India as a whole, they show a gradual, steady and marked advance towards refinement. The bangles, bracelets, and anklets of Sànchí, are the clumsiest possible. They are thick, rough, and heavy, almost devoid of workmanship, and large enough to cover from one to two-thirds of the legs and fore-arms. Judging from specimens still in use among the lower orders of the people away from urban influ-

ence, they must have been made in those [illegible] bell-metal. The bangles and armlets of [illegible], although mostly of the same patterns, are smaller, lighter and neater, and the anklets are somewhat less ponderous. At Bhuvanesvara they are not only reduced in size and weight, but greatly improved in appearance. Amidst a few of the older ones there is quite an abundance of specimens, which for neatness, elegance, and beauty, would not stand in any great disadvantage besides the finest specimens of their times from any other part of the world.

Nor is this remarkable, considering the celebrity which India has enjoyed from remote antiquity for the excellence of her ornaments. Adverting to it, Mr. Maskelyne, in his Report on Jewellery and Precious Stones in the French Exhibition of 1866 (class XXXVI), says: "It is said that even that delicate and most sensitive instrument of touch, the hand of the Hindu, is not sufficiently sensitive for fashioning the finest sorts of Indian filigree, and that children alone are employed in the manipulation of such a spider-web of wire. Of fabrics so delicate, nothing is to be seen among the jewellery at Paris, indeed the best of the Indian filigree, and that by no means worthy of its source, is to be found among the articles exhibited under the goldsmith's class. It is to be remarked of this elegant and primitive, perhaps very earliest, form of ornament in precious metal, that it had probably reached its limits for delicacy and design at a very early period, and has made no real progress in [illegible] times. In fact the early Greek filigraner worked with as much facility and delicacy as the Hindu artisan of our day, who inherits the skill and the methods he uses by the direct descent of an immemorial tradition. But there are other forms of the goldsmith's art scarcely less venerable than that of the filigree, possessed of great native beauty and which also have survived in India through the long sol-

of centuries, as the Zend and Sanskrit languages have survived there, the inheritance of families or clans. Those forms of art are perishing one by one, as the family in whom it may have been handed down becomes extinct or lets the thread be broken, each of these hereditary industries of India moves on with time to its extinction." It is of course impossible to expect specimens of filigree in sculpture, but the ornaments exhibited by no means fail to support the pretensions of the country to superior excellence in the goldsmith's art.

Crowns, coronets and tiaras.

When treating of coiffure frequent references have already been made to crests, coronets and tiaras. Crowns were held in much higher estimation; and carvings of a great variety of them, some of elaborate workmanship, are to be met with. The richest crown that has come to my notice, is one worn by the goddess Indrání at Yájapur. In outline, it is very like an Iránían cap, but most sumptuously bedecked with jewels all over. Illustrations Nos. 63 and 142 in my 'Antiquities of Orissa,' Vol. I., exhibit crowns for gods, but of less pretension. The circlet in Woodcut No. 62 is so like a ducal coronet that it may be mistaken for one from the head of Richard Cæur-de-lion. The *Ashṭanáyikás* of Yájapur show other and remarkable specimens.



No. 62.

Ear ornaments.

Ornaments for the ears are also exhibited in great variety, but, owing to their small size and the rough usage to which the hands, nose and ears of most of the statues had been subjected by Muslem invaders, I have not been able to obtain drawings of a sufficient number of perfect and well-marked specimens. My drawings include representations of only five varieties, but they are characteristic, and will, it is believed

prove interesting. Woodcut No. 63 is from a female figure in the Great Tower of Bhuvanesvara. Its drooping plume and fan-like appendages are peculiar, and have been noticed on several male figures. Sometimes the fan, probably made of party-coloured fringed cloth, is surmounted by floating ribbons. The *talapatra* or "palm leaf ear ornament" named in the Amarakosha, was probably no other than this fan. Woodcut No. 64, from the same place is worn on the ears, hooked in a hole in the helix or outer rim, or tied to the hair near it. It is still in use on the top or sides of the head and is known in Bengal, where it is made of jewelled gold plates and strings of pearls by the name of *jhumka*. Woodcut No. 65 is called *karnaphula* or "the ear-flower," and has a pretty tulip drop; it has been taken from a figure of the boar incarnation in a small temple adjoining the Great Tower. The ornament was a great favourite of Bengal and the famous Manikarnika at Benares derived its name from the circumstance, says the legend, of the goddess having, by accident, dropped an ornament of this kind at that sacred spot. Woodcut No. 66, from the Markanda Tank in Puri is the representation of an ornament which is now known in Bengal by the name of *dhedi*. It is a shield-shaped disk of gold worn on the lobe of the ear, sometimes with, and sometimes without, a pendant. Woodcut No. 67, from the Great Tower represents two ornaments, a tulip d... hung from the antitragus, and a stud with pearl fringe

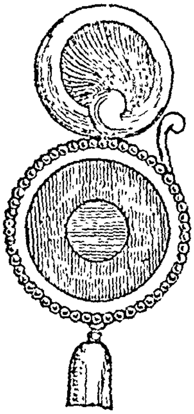


No. 63



No. 64

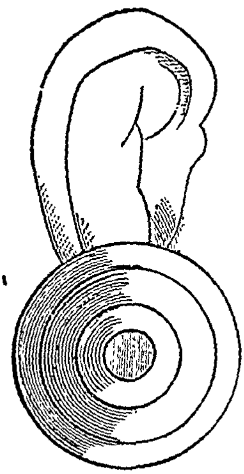
pendant, attached to the lower edge of the lobule. Several other forms may be noticed in some of the illustrations attached to my 'Antiquities of Orissa.'



No. 65.

Nose ornaments.

Studs and rings for the nose set with stones or pearls are great favourites in the present day, and were probably not unknown in former times. In the *Sáradátilaka*, mention is made of an Andhra lady "whose graceful ear is decorated by the scroll of gold; whose nose-ring set with pearls trembles to her breath; and over whose bosom spreads the saffron-dyed vest;" * but no such ornaments have been met with in sculpture.



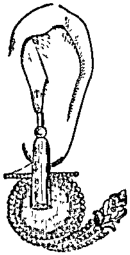
No. 66.

Necklaces, bangles, bracelets, &c.

Of necklaces, the finest specimens are to be seen in the large statues in the niches of the Great Tower at Bhubanes'vara shown in the illustrations annexed to my 'Antiquities of Orissa.' In their lockets the collets for the setting of precious stones on a gold frame is distinctly indicated. Some of the pendants of the large necklace of the male figure, Kártikeya, appear as if intended to represent tiger's claws mounted on gold, a favourite charm still in use in some parts of India. The small necklace is formed of small lockets edged with pearls. The garland across the chest was probably formed of flowers, though the bell-shaped pendants of Bhagavatí's garland would suggest the idea of its being the representation of a metallic ornament. The necklet of Bhagavatí is formed of

* Wilson's Hindu Theatre II., p. 385.

stars of five pearls or gold beads each, and a string of pearls is worn between the principal necklace and the necklet. A string of bells descends from the right breast, and a string of pearls or beads passes from the right shoulder to the left side.



No. 67.

Ornaments for the Hand.

Of ornaments for the forearm the most important in the present day is the *bálá*, a ring of metal of a cylindrical form, ordinarily plain, but sometimes twisted, or otherwise wrought, which Bengali women reckon as the emblem of their married state, and never open it as long as their husbands are living. If made of gold or silver it generally encloses a bit of iron, but a separate annulet of iron is also commonly worn, which then forms, like the European marriage ring, the emblem of the married state. In Orissa the *bálá* is replaced by the *khâru*, which differs from the former in being flat, and not cylindrical. Its under surface is flat and smooth, but the upper is wrought in various patterns, a beaded form being the most prevalent. In sculpture it is the commonest, and in rich specimens has an elaborate boss or crest-like appendage on the top. Woodcut No. 68. The beaded pattern is sometimes edged in by rims of which woodcut

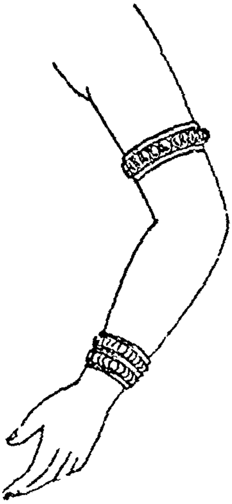


No. 68.

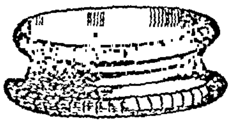


No. 69.

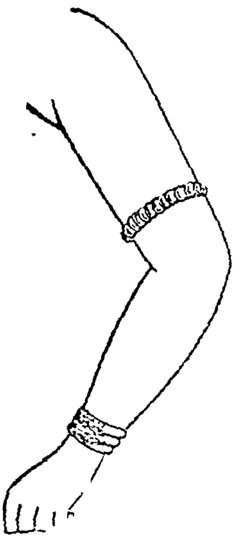
No. 69 offers a good specimen; at other times it is doubled omitting the crest, (woodcut No. 70), or the spaces between the two circlets widened, or arched, or otherwise developed and ornamented. Woodcuts Nos. 71, 72, 73 and 74. In Calcutta the last is in common use, and is known under the name of *paṭuri;* it is the exact counterpart of the European bracelet. Woodcuts Nos. 75 and 76 exhibit the well-known conch-shell ornament *(saṅkha).* It is formed by cutting the shell, (*Maza rapa*, of Lamark, *Turbinella rapa* and *Voluta*



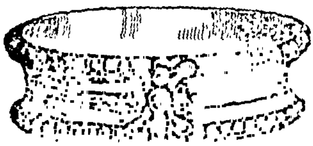
No. 70.



No. 72.



No. 71.



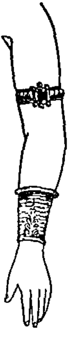
No. 73.



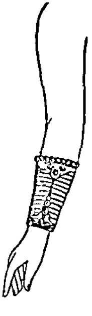
No. 74.

*gravis*, of Sir E. Tennant,) into annulets, and eight or ten of them are arranged in a tapering form, and

then mounted with gold beads, bosses and other decorations; some of the annulets are left white, while others are dyed with lac of a bright crimson colour. It has now entirely gone out of fashion in Calcutta, but among the poorer classes in Orissa it reigns supreme. A form of it made of gold and buffaloe horn, or of gold and horn set with precious stones and called *petá chudi*, has also lost its hold in Calcutta; but it still continues a favourite amongst Uriyá belles. For the arm the *báju*, the *tábij* and the *tád* were, until recently, the leading ornaments, and woodcuts Nos. 74, 75 and 77, exhibit very choice specimens.

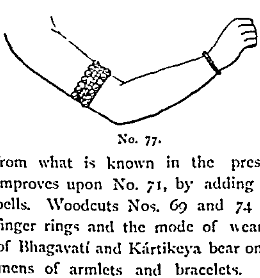


No. 75.



No. 76.

The *báju* is apparently mounted with precious stones, but the others are simply wrought metal. In woodcuts Nos. 71, and 72, B, there are two specimens of the *tábij* quite different from what is known in the present day, and No. 68 improves upon No. 71, by adding to it a fringe of small bells. Woodcuts Nos. 69 and 74 show various kinds of finger rings and the mode of wearing them. The figures of Bhagavatí and Kártikeya bear on them some rich specimens of armlets and bracelets. 'Antiquities of Orissa, illustrations Nos. 68 and 142.



No. 77.

With the Grecians the zone was a most important article of attire, for it served not only as an ornament, but as a belt to tie the chiton round the waist, and produce those graceful and charming folds in the drapery which have formed the theme of admiration to all lovers of the classic art. In India it had not this double duty to perform, but it was, nevertheless, held in high estimation, not only by the fair sex, but even by grown up men; and in sculptures all persons of consequence are decorated with it. It was made of various forms, but a fringe of bells was held in the highest favour, and known under different names. Sometimes it was worn tight like a belt, but at others, loosely like a garland of many rows. The form most in requisition was called *chandrahára*, or "the garland of moons," Uriya *goṭe*, and the most gorgeous specimen of the mediæval style of it is seen on the figure of Bhagavati above noticed. It is formed of three massive chains of a curious diagonal pattern, set with spangles, and held together in front by a rich and elaborate clasp, having a jewelled pendant. From the lowest chain hang a series of bells and pendant chains festooned all round the body. The zone of Kártikeya is quite as magnificent, and its principal pendant is even more elaborate and gorgeous. Zones of less pretensions may be seen on plate XXII., of my 'Antiquities of Orissa.'

Waist ornaments.

The exigencies of climate have not permitted European ladies to devote any attention to ornaments for the legs and feet, except in the decoration of their boots and shoes, as also the garter, which in the middle ages was an important female ornament. The case has been very different in India, and rings for the toes and anklets and leglets of various kinds have been current from an early epoch. The most favourite among them was a chain band fringed with little bells, round the feet, or small metal shells filled with shots, which made a jingling

Leg and Foot ornaments.

sound when in motion. It was called *kiṅkiní*, and worn b



No. 78.



No. 79.



No. 80

both sexes. A form of it, called *páñjara* from the Persia
*Páyzeb*, is in Bengal now given to brides only, and rejecte



No. 81.

within a year or two after marriage; but up-country women and Muhammadan ladies wear it till an advanced age. Modifications of this orna-



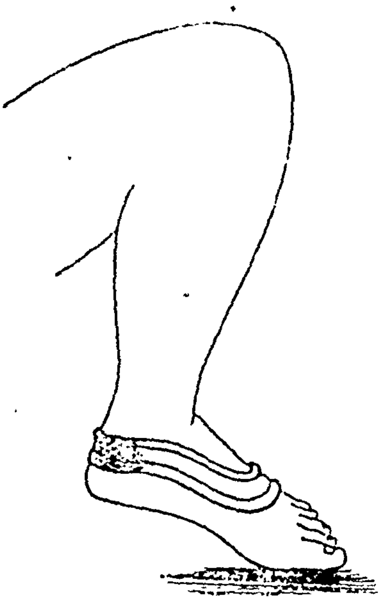
No. 82.

ment are shewn in woodcuts Nos. 78, 79 and 80 Th
chain is sometimes replaced by hollow tubes filled with shot
These are called *Núpura* in Sanskrit. Woodcuts Nos. 8
82 and 83 represent anklets, of which No. 82 and th
upper one of No. 79 are the only ones now in us
They are called *Gujri*, from having been first introduce
by the belles of Guzrat.* They are made hollow and fille

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* Thus in the *Sárad-tilaka*; "There goes the maid of Gurjara, bloomin
as with perpetual youth, having eyes like the *chakora*, of the complexion of th

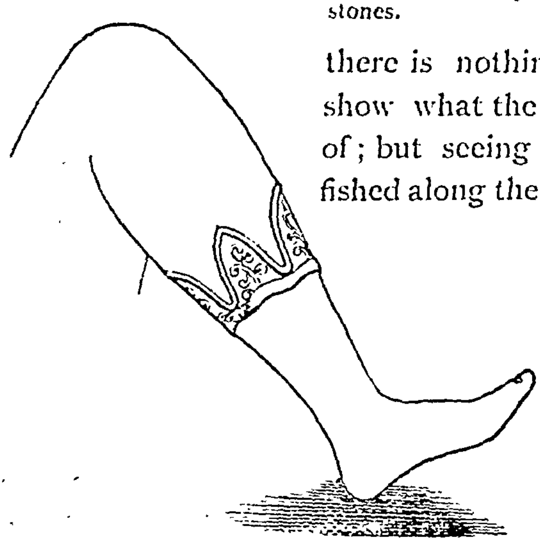
with shots, or fringed with bells. The ornaments exhibited in woodcuts Nos. 84, 85, and the upper one of 78, were confined to Orissa and Telingáná where the dress worn was generally short, and the leg was left sufficiently bare to display them. They were worn by both sexes, but on one leg only. A modification, consisting of a curiously bent rod, is still in use in some parts of Orissa, and is known under the name of *bánkmala.* It was unknown at Sánchi and Amarávatí. Woodcut No. 83 shows some toe rings.



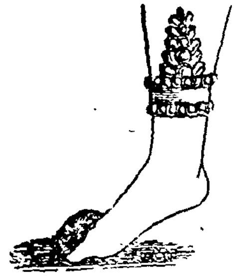
No. 83.

Pearls and precious stones.

It is scarcely necessary to observe that, with the exception of the collets noticed above, there is nothing in the sculptures to show what the ornaments were made of; but seeing that pearls have been fished along the Coromandel Coast from



No. 84.



No. 85.

yellow *rochaná*, and a voice musical as that of the parrot. She wears anklets of silver, large earrings set with pearls, and her bodice is buttoned below the hips with gems." Wilson's Hindu Theatre, II. 384.

long before the time of Alexander's invasion; that pearls, precious stones, and gold, as elements of ornament, have been known in the country from times immemorial; and that Manu ordains a fine for "piercing fine gems, as diamonds or rubies, and for boring pearls or inferior gems improperly," there need be little doubt as to what their materials were. Of course it is possible that what I take for pearls may have been only beads of metal, or stone, or baked clay, and the bangles may have been of bell-metal; but it is not very probable that the princes, under whose orders the temples were designed and built, always satisfied their passion for ornaments with nothing more precious. In the Bráhmaṇa of the old recension of the Yajur Veda, which dates from at least eight centuries before the Christian era, jewellery is recommended to be strung in gold.* The word used for jewellery is *Káchα*, which may mean glass, or glass beads; but it would be unreasonable to suppose that those who set glass on gold, did not follow the same procedure with diamonds, rubies, and other precious stones, for which they had names, and which they knew and prized. In the first century before the Christian era, S'udraka, in his play of the 'Toy Cart,' did not think it inconsistent to describe in the court-yard of a common courtezan's house, jewellers' shops, "where skilful artists were examining pearls, topazes, sapphires, emeralds, rubies, lapislazuli, coral, and other jewels; some set rubies in gold, some work gold ornaments on coloured thread, some string pearls, some grind the lapislazuli, some pierce shells, and some cut coral."† Nor were the people satisfied with such originals; the requirements of society rendered the fabrication of false jewellery a commonly practised art. This is evident from a passage in the same play, in which a question is raised about the identity of certain ornaments produced in a court of justice, whereupon the Judge asks:

* Taittiriya Bráhmana, III. 665. † Wilson's Hindu Theatre, II. p. 85.

*Judge.* "Do you know these ornaments?"

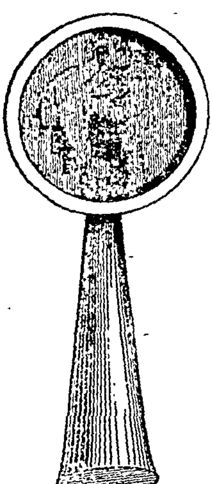
*Mother.* "Have I not said? They may be different, though like. I cannot say more; they may be imitations made by some skilful artist.

*Judge.* "It is true. Provost, examine them; they may be different, though like; the dexterity of the artists is no doubt very great, and they readily fabricate imitations of ornaments they have once seen, in such a manner, that the difference shall scarcely be discernible."*

Eight centuries after that time Uriyá Rájás may be supposed, without any great stretch of imagination, to have had some such bijouterie.

Looking-glasses.

Looking-glasses deserve to be mentioned as a part of the toilette, for in ancient India, they were rarely designed as ornaments for rooms. The most rudimentary form of this article appears in finger rings, in the shape of bits of crystal set on foils. Such rings were formerly, as at present, worn on the thumb, and many sculptured nymphs may be seen beholding the reflection of their countenances on their rings. Larger specimens of a circular, oval, or oblong shape, framed and mounted on handles are not wanting, and these invariably occur in the hands of young ladies. Woodcut No. 86. What the reflectors were made of, whether foiled glass or crystal, or polished metal plate, I cannot ascertain. In the Sanskrit language there are several words to indicate mirrors, and most of them are derived from roots implying reflection, but none a metal, or polishing. In the mediæval and later ancient works, the words are largely used, but I have not yet met with any of them in the Ṛig Veda



No. 86.

* Wilson's Hindu Theatre.

Sañhitá. To persons acquainted with crystals and metal foil and familiar with the art of preparing false jewellery, the idea of setting small plates of crystal on foil for the manufacture of looking-glasses would be easy enough, and that is the way, most probably, in which ancient Indian mirrors were made. Polished metal plates were, however, frequently used, and in the present day orthodox people prefer them to foiled glass in connexion with religious ceremonies. Such plates are usually made of silver, steel, brass, or a speculum metal in which silver predominates. The ancient Egyptians preferred copper, or an alloy of copper and tin, *i. e.*, bell-metal; but the Hindus hold that alloy as impure, and never use it for religious purposes. For ordinary, every-day, domestic utensils and ornaments, however, it was, and indeed is, very largely employed, and, seeing that it is cheap, and the Uriyás are particularly successful in producing it of a very superior description, rivalling silver in colour and brightness, it was probably also used in the fabrication of mirrors. The word *kácha* for glass occurs in works considerably over two thousand years old, and seeing that the Singhalese, who borrowed all the arts of civilized life from the Hindus, make mention, in the *Dipawanso*, of a "glass pinnacle" placed on the top of the Ruanawellé dagoba by Suidaitissa, brother of Dutugaimuna, in the second century before Christ, and of a "glass mirror," in the third century B. C.,* and Pliny describes the glass of India being superior to all others from the circumstance of its being made of pounded crystal (Lib. XXXVI., c. 66), it would not, I fancy, be presumptuous to believe, that it was, in ancient times, used in India in the formation of looking-glasses; but I have nothing to show that mercury was used in fixing the foil on it. The looking-glasses used in the decoration of the marble

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* Tennent's Ceylon. I p. 454.

bath in the palace at Agra, were foiled with a film of lead and tin poured in a melted state in large glass globes which were afterwards broken to form small mirrors. This mode of foiling is still in common practice in many parts of India. A counterpart of the mirror shown in the woodcut occurs in the garden scene at Sánchí. A female figure from Bhuvanes'-vara, in the Museum of the Asiatic Society of Bengal, No. 806, is seen holding a circular convex mirror by a cross strap on its back. The handled mirror shown in the woodcut is, in appearance, very like the looking-glasses of the ancient Egyptian ladies. In the finer specimens of such articles the handles were probably carved, as in Egypt, or ornamented with metallic mountings, but I have met with no such specimen.

## V.

# FURNITURE, DOMESTIC UTENSILS, MUSICAL INSTRUMENTS, ARMS, HORSES AND CARS IN ANCIENT INDIA.

*Furniture*,—*bedsteads, bedding, footstools, chairs, folding-stools, teapoys, thrones, tables.* Mode of sitting. Umbrella. Chámara. Fans. Domestic utensils. Drinking cups; water carafes; goblets; spittoons; betel boxes; courier bags; leather bottles; dressing cases. Musical Instruments. Boats. Food and drink. Offensive arms,—bows, arrows, swords, lances, discuses, lassos. Defensive arms,—shields, armour. Flags. Trumpets. Horse. Harness. Whips. Chariots. Wagons.

Furniture and Domestic Utensils. Bedsteads.

THE most prominent characteristic of the Indian mode of living has always been extreme simplicity. It is not remarkable, therefore, that there should be wanting traces of any great variety of furniture and domestic utensils among them. The four-poster was probably never known; and of almirahs, chests-of-drawers, and the like, there are no names in the Sanskrit langugae. The bedstead of the ancient Uriyás was ordinarily, like the ancient Egyptian and modern Indian charpoy, a rope matting stretched on a simple frame of wood supported on four legs.

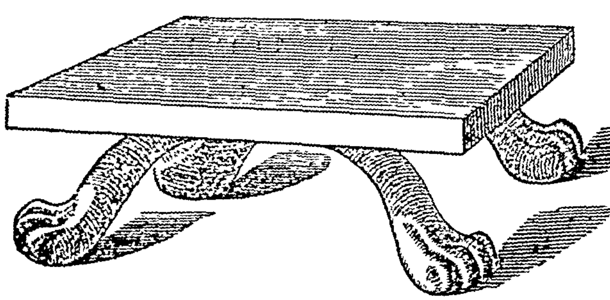


No. 87.

For men of consequence and wealth, the matting was re-placed by tape, *(palang)*, or boards, *(takhtaposh)*, the frame-work set off with mouldings and carved work, and the legs cut into various shapes. According to the *Brihat Sañhitá*, which dates from the middle of the sixth century, the woods most esteemed for bedsteads were those of the *Asana* (ásan, *Pentaptera tomentosa*), *Syandana* (*Dalbergia*

*ougeinensis)*, *Chandana* (sandal wood, *Pterocarpus santalinus)*, *Haridra.** *Suradáru* (deodar pine, *Pinus deodaru)*, *Tinduki* (a kind of ebony, *Diosperos glutinosa)*, *Sálạ* (*Shorea robusta)*, *Kasmari* (gambhar, *Gmelina arborea)*, *Anjana* (*Micheelea champaka)* *Padmaka* (?) a Nepalese timber tree yielding a red coloured wood much used in dying medicated oils) *Sáka* (teak, *Tectona grandis)*, and *Siñsápa* (sisu, *Dalbergea sisu)*.† These include some of the best timber-producing trees of India; the wood of most of these trees is hard, close-grained, susceptible of a good polish, and in every way well-adapted for cabinet work. The value of sandal, ebony, teak, sisu and gambhár for such purposes is too well known to need iteration: the last is particularly esteemed for the fabrication of the sounding-boards of musical instruments. It is worthy of note, however, that the list does not include the toon, which now-a-days is so extensively employed in furniture-making.

The Silpa S'astra and some of the Puráṇas give detailed directions for felling these trees at, particular seasons when the circulation of the sap has stopped, and for seasoning the wood afterwards so as to prevent unequal contractions and cracks in drying.



No. 88.

*Dr. Roxburgh takes Haridra to be the Sanskrit name of *Mesua ferrea*, but the Mesua never attains any great size, and cannot yield any timber fit for making bedsteads; the Haridra of the text, therefore, evidently refers to some other tree than *Mesua ferrea*.

† अशनस्यन्दनचन्दनहरिद्रसुरदारुतिन्दुकीशालाः ।
काश्मर्यञ्जनपद्मकशाका वा शिंशपा च शुभाः ॥ अ० ७९ । २ ।
Brihat Sañhitá, p. 398

Trees, which have been struck by lightning, or knocked down by inundations, storms or elephants, or which have fallen towards the south side, as well as those which grow on burial, burning, or consecrated grounds, or at the confluence of large rivers, or by the road-side, also those which have withered tops, or an entanglement of heavy creepers on them, or bear thorns, or are the receptacles of many honey-combs and bird's nests, are reckoned unfit for the fabrication of bedsteads, as they are inauspicious, and are sure to bring on misfortune, disease and death.* Some of the woods commended are supposed to be most propitious when used singly, such as the gambhár, the ásan, the sisu and the sandal; others may be used singly or jointly, such as the teak and the sál, and the haridra and the kadamba; but the *Dalbergia ougeinensis* and the mango should never be used separately; the last may be used for the legs of bedsteads, but the framework should be of some stronger wood. The sandal wood is good enough by itself; but it is most highly prized when mounted with gold and jewels.† But the best of all materials for bedsteads, according to the *Brihat Sañhitá*, is ivory. It should be used solid for the legs, and in thin plates for in-laying or veneering on the frame-work, which should be of some choice wood. In selecting ivory about two thicknesses at the root of the tusk, which is hollow, should be rejected, if the animal from which it is taken come from the plain; but

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* अशनिजलानिलहस्तिप्रपातिता मधुविहङ्गकृतनिलयाः ।
चैत्यश्मशानपथिजोर्ध्वशुष्कवल्लीनिबद्धाश्च ॥ ३ ॥
कण्टकिनो वा ये सुमहानदीसङ्गमोद्भवा ये च ।
सुरभवनजाश्च न शुभा ये चापरयाम्यदिक्पतिताः ॥ ४ ॥

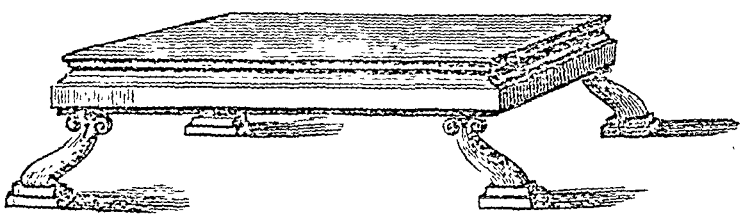
Brihat Sañhitá, p. 399.

† केवलचन्दनरचितं काञ्चनगुप्तं विचित्ररत्नयुतं ।
अध्यासन् पर्यङ्कं विबुधैरपि पूज्यते नृपतिः ॥

Brihat Sañhitá, p. 401.

if it be a mountain grazer, somewhat less.* Great stress is also laid on the venation of the ivory. If the figures formed by the venation be of auspicious objects, the substance is good, otherwise it should be rejected. In the case of wood venation is approved, but large knots, hollows, and perforations by worms or insects, are strongly condemned, and detailed descriptions are given of the different kinds of misfortune which await the unfortunate wight who happens to sleep on a bedstead with knots in the end, in the shaft, in the globular central bulging, or in the top of its legs. The framework, according to the authority quoted, should have mouldings above and below, or be carved in various ornamental figures, or inlaid with gold, ivory and precious stones.

The standard measure for carpenter's work is the *angula*,



No. 89.

or finger's breadth of eight barley-corns divested of their husk, and laid side by side. This finger would be all but exactly equal to an inch; practically native carpenters, both in Bengal and the North-Western Provinces, take the English inch to be equal to eight barley-corns or *jaos*. Of this scale, the royal bed should measure a hundred, that is eight feet and four inches in length. For princes, a length of ninety

* गजदन्तः सर्वेषां प्रोक्ततरूणां प्रशस्यते योगे।
कार्य्योऽलङ्कारविधिर्गजदन्तेन प्रशस्तेन ॥ १९ ॥
दन्तस्य मूलपरिधिं द्विरायतं प्रोज्झ्य कल्पयेच्छेषं।
अधिकमनूपचराणां न्यूनं गिरिचारिणां किञ्चित् ॥ २० ॥
Brihat Sañhitá. p. 401.

inches, or seven feet six inches, is held sufficient. The prime minister comes in for eighty-four inches, the commander-in-chief for seventy-eight, and the high priest for seventy-two.* The rule as laid down is imperative; but I fancy the author intended some exceptions, otherwise, His Grace the Hindu Archbishop, who happened to be somewhat of a grenadier in height and of Falstaffian proportions, would have made a sad time of it in his bed of barely six feet, unless he got over it by a special dispensation. The breadths of these several bedsteads measured three-fourths of the length, that is four feet six inches to six feet, and the height one-fourth, or one foot six inches to two feet one inch.† Nothing has been said in the *Brihat Sañhitá* about the size of bedsteads for ordinary people, but it is to be presumed that its measure was not subject to any sliding scale.

As none of the bedsteads carved on the temples is of natural size, it is impossible to ascertain how far the rules of the *Brihat Sañhitá*, as regards this class of furniture were respected in practice. The breadth of the bedsteads seen, as far as I can guess, is about three-fourths of the length, but the height is not always exactly one-fourth of the length, or even near it. The principal causes of diversity, however, are the legs. Unlike the North Indian charpoy, whose legs are almost invariably of the same shape, the Uriyá bedsteads dis-

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* कर्माङ्गुलं यवाष्टकमुदरासक्तं तुषैः परित्यक्तं ।
अङ्गुलशतं नृपाणां महती शय्या जयाय कृता ॥ ८ ॥
नवतिः सैव षडूना द्वादशहीना त्रिषट्कहीना च ।
नृपपुत्रमन्त्रिबलपतिपुरोधसां स्युर्यथासङ्ख्यं ॥ ९ ॥

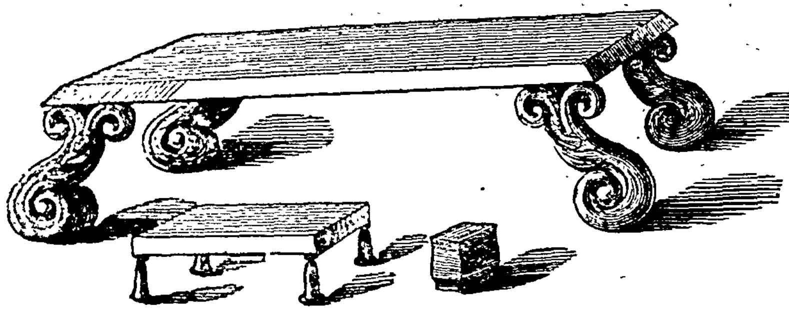
Brihat Sañhitá, p. 399.

The ordinary angula is much less than an inch, twenty-four of it going to a cubit, or a foot and a half. If that measure be accepted the royal bedstead would be reduced to six feet, and that of the high priest to a little over four feet.

† आयामत्र्यंशसमः पादोच्छ्रायः सकुक्षिशिराः ।

Brihat Sañhitá. p. 400.

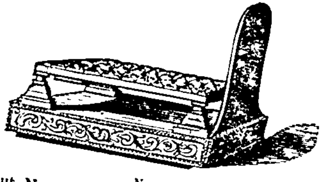
play legs of at least a score of different fanciful shapes quite unlike each other, some of them very similar to European designs of the present day, or such as may be copied to advantage. The woodcuts Nos. 87 to 91, exhibit some of the



No. 90.

typical forms, but they are by no means the most select. They were copied as they were met with, without careful comparison and selection; but such as they are they will most likely prove interesting. Woodcut No. 87, from Muktes'vara, exhibits a very simple form with a plain border and legs, carved like lion's paws. No. 88, from the same locality, is remarkable for the manner in which the lion paws are fixed to the platform, not at the angles as usual, but considerably within the borders. No. 89, from the Great Tower, has very chastely designed legs, and the border of the platform is set off with a complicated series of mouldings. The legs of No. 90, from the same place, are somewhat like those of the last, but its platform has a bevelled edge and no moulding. Before it are seen a footstool with turned legs, and a curiously shaped vessel, which I take to be a spittoon—two articles of frequent occurence as accessories to bedsteads. To a nation so inordinately addicted to chewing betel leaves, the spittoon is a most indispensible article of furniture, and in groups and court scenes, it often occurs in the hand of an

attendant. The footstool, when placed besides a bedstead, served the purposes of a step for ascending on the bed; but it was also used as a stand for the betel-box, drinking cups, water carăfés, or flagons for wine. Wood-



No. 91

cut No. 91, from the Great Tower, exhibits the richest bedstead I have seen in Orissan sculpture. It is mounted on an elaborately carved dais, and has very pretty legs of a square pattern, the like of which are very common in Bengal in the present day. On one side of the bedstead is attached a semi-circular head-piece, designed to prevent the pillow from falling over. The bedding (Sanskrit *talpa*) appears to have been stuffed, and the stuffing kept in its place by tufting. There was a large thick pillow on its upper side, but my artist forgot to copy it. From a slightly projecting mark under the frame, I fancy that such bedsteads were sometimes provided with secret recesses for the deposit of valuables and jewellery, as is still the case in some parts of the country. The bedsteads were used both for sleeping, and as ottomans or sofas.

Thrones.

The throne designed by Phidias for his renowned Olympian Jupiter was a large, high-backed arm-chair, elaborately carved, and sumptuously decorated, but still a chair, or a seat for one person, as the word θρόνος originally meant in Greek, in contradistinction to the δίφρος or couch for holding two or more persons, and the Egyptian thrones, as preserved in sculptures and paintings, are all huge chairs of some kind or other. The

mon, and carvings of animals and human figures are rather exceptions than otherwise. Even the two large thrones of Jagannátha, in the Purí and the Guṇḍichá temples, are perfectly plain and uncarved. It should be added, however, that it is possible that the structures which I have taken for *siñhásanas*, or thrones, were intended only for *píṭhas* or ottoman seats and not thrones.

Sofas, chairs, benches, &c.

Of ottomans, five kinds are described in books; the first measuring three feet by one foot six inches, with a height of nine inches, called *Sukhásana;* the second, six feet by three, with a height of one foot six inches, called *Jayásana;* the third, nine feet by four feet six inches, with a height of two feet three inches, called *Subhásana;* the fourth, twelve feet by six, with a height of three feet, called *Sidhyásana;* and fifth, fifteen feet by seven feet six inches, with a height of three feet nine inches, called *Sampátásana.* Others, called *Janaka*, *Rajapíṭha*, *Kelipíṭha* and *Añgapíṭha*, are also occasionally mentioned. These were made, according to choice, of metal, stone or wood, and carved into various shapes. Of metals, gold, silver, copper, and brass, were most esteemed, and iron condemned, except for purposes of incantations.* Of stones, the gritty sandstone alone was condemned, and the other kinds recommended, with the proviso, that the colour of the stone should cor-

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* In ancient Persia iron bedsteads were used only for biers, and the Pársis still use them for conveying the dead to their Towers of Silence. Formerly, Muhammadans also used iron frames, for biers, and Sheikh Sàdi describes death as "iron passage," *áháng raftan*, as in the verse—*chu áhang raftan kunad ján i pák, che bar takht murdan che barru i khák.*

"When the pure soul is making its iron passage, what avails it whether death takes place on a throne or on the face of bare earth?" The Romans named death *Ferrius somnus*, iron sleep, and the coincidence of the use of the word iron for such an idea among the Persians and the Romans is remarkable, but there is nothing to show that it is other than a mere coincidence. The hardness of iron is alone enough to account for it.

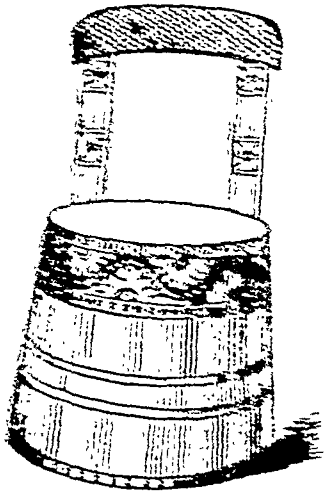
respond with that of the planet which presided for the time being on the destiny of the person who was to use the seat; thus, when a man happened to be under the influence of Saturn, he had to use a stone seat of a blue colour; but if Venus happened to be the presiding planet, a bright yellow stone was the most appropriate. Crystal formed an exception to this rule, and was reckoned fit for use at all times. As regards wood, the mango, the jáman, the kadamba, and all very light woods, were, as a matter of course, held unfit, as also all very heavy, knotty wood with irregular veins. The most appropriate woods were the sandal, gambhára, sála, sisu, ebony, teak, bakula, &c.

Seats of these various descriptions are frequently met with in sculpture. A very good specimen of the first kind of sofa occurs in the second compartment of the Amarávatí stone now in the Indian Museum where it is provided with corner posts and a tester frame, and is being carried about on the shoulders of men in a procession. Images of gods and Hindu bridegrooms are to this day carried about in sedans of this description, and they are known under the old name of *Sukhásana*. Their short height makes them peculiarly fitted for this purpose. The other kinds were intended to be kept as fixtures, *i. e.*, not much moved about. In sculpture, the ends of their legs are frequently carved into the form of lion's paws, or eagle's claws, and the shafts of the legs are sometimes, but not often, shaped like the legs of those animals. Cane morás are also frequently met with, shaped very much in the same way as now. Woodcut No. 92. A variety of it with a raised back is shown in woodcut No. 92, taken, like the last-named Illustration, from one of Mr. Fergusson's plates of Amarávatí sculptures. Seats similar to it are common enough in the North-Western Provinces, though the require-



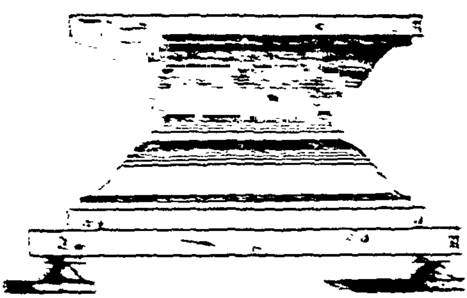
No. 92.

ments of Europeans have caused a change in the form of the back-rest. That they were common in former days is evident from a verse in Kálidása's *Kumára-sambhava*, where the mountain-king Himálaya is described to have offered such seats to the seven sages, who came with the proposal of marriage of his daughter Umá with Mahádeva.* At a much earlier period we find in the Rámáyana and the Mahábhárata, and even in the Rig Veda, seats or chairs of gold described as invariable accompaniments



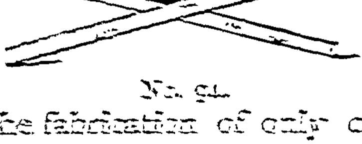
No. 92.

of royalty. Thus Apámnapát, "the grandson of the waters," in the last-named work, is pourtrayed as "of golden form, of golden aspect, of golden hue, and shining, seated on a seat of gold."† The mention of carpenters in that work‡ implies the existence of wooden furni-



No. 93.

ture, and beds and chairs and stools would be the most probable articles of that description that would be turned out by such artisans; for had they been employed, as has been supposed by some, in



No. 94.

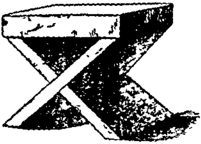
the fabrication of only cars and waggons, they would have been named *Rathakáras* and not *Sútradháras* or *Takshakas*. In the time of Manu's Laws, the demand for cabinet-ware was sufficiently brisk to render the establishment of a distinct

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* Canto VI., v. 48. † Wilson's Rig Veda, II., 301.
‡ Ibid I., 186, 173; IV., 85.

class or caste of men necessary for exclusive devotion to carpentry.

In Orissa, wooden stools and cane morás were, it seems, the ordinary form of raised seats. The morá is identically of the same shape as is common now. Wooden stools appear under different forms. Woodcut No. 93 exhibits a well-finished specimen: it occurs repeatedly on the Great Tower.

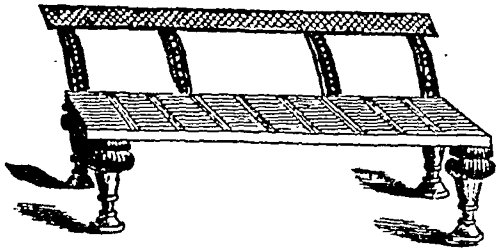


No. 95.

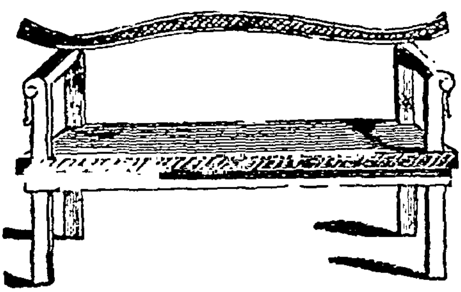
But the most remarkable among the stools are those which are mounted on crossed legs, very much like the folding camp-stools of the present day (woodcuts Nos. 94 and 95); though, whether they were so made as to fold or not, it is of course impossible now to determine. Fold-stools like these are not unfrequently represented in the illuminations of mediæval European manuscripts, and formerly, when a bishop was required to officiate in any but his own cathedral church, where his throne was erected, a folding stool was placed for him in the church, and he frequently carried one with him in his journeys. Among the ancient Egyptians and Assyrians, they seem to have been very common, as both Wilkinson and Layard have figured a great variety of them. In Orissa, they occur both on the Great Tower, and on the Temple of Muktes'vara. Occasionally these folding stools were used as tables, and on the Great Tower, one may be seen holding either chessmen, or dice, or a roll of paper, with two persons seated on the opposite sides. In the Temple of Muktes'vara it is used as a book-stand.

Of benches and chairs with back and arm-rests, no specimens have been seen among Bhuvanes'vara sculptures, but at Amarávatí, long benches, with high backs of [illegible] not unoften of the Buddhist rail pattern, are [illegible]

of them have arm-rests. Woodcut No. 96 represents a very common form; it has well-carved and turned legs, battened seat, and a sloping back of carved work. Woodcut No. 97 has arm-rests with rounded tops, the back being made of a single wavy bar without any intermediate support. These were used sometimes with and sometimes without, cushions and pillows. The last had a foot-stool of a rich pattern in front, which is shown under a separate head. (Page 260, woodcut No. 103.)

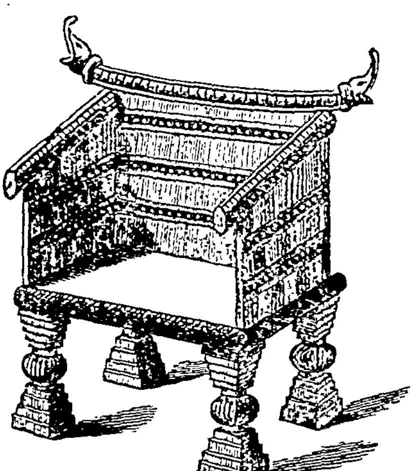


No. 96.



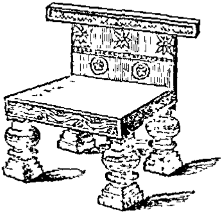
No. 97.

Chairs with or without arm-rests, are likewise frequently met with, and of designs which, for their time, were certainly remarkable, though by no means displaying the taste, elegance, and richness, which characterised ancient Egyptian and Assyrian furniture. For easy reference, a few of these, like the benches, have been copied on the margin from Mr. Fergusson's "Tree and Serpent Worship," but so delineated as to show their character and perspective more fully than can be perceived in the positions they occupy in Mr. Fergusson's



No. 98.

plates. Woodcut No. 98 shows a form which occurs repeatedly as a repository for some sacred object, or a throne for a royal or distinguished personage. Its seat is of about the same height as that of an ordinary chair, so that one can sit on it while resting his feet on the ground; its sides and the back are protected by rails, strengthened by a double line of ornamented cross bars. Its arm-rests, seat-frame and the bar on the top of the back are all neatly carved, and the last terminates on each side in an alligator head, an ornament which, under the name of *makara-mukha*, is of frequent occurrence in Indian sculpture and carved work. The legs of the chair are formed by doubling the leg of the tukhtaposh, No. 91, with an intervening ribbed globe. There is nothing to show how the seat was formed, but from traces of cushions and pillows, I think it was boarded. No. 99, is as heavy and primitive as the last, but it has no arm-rest and its back is low.



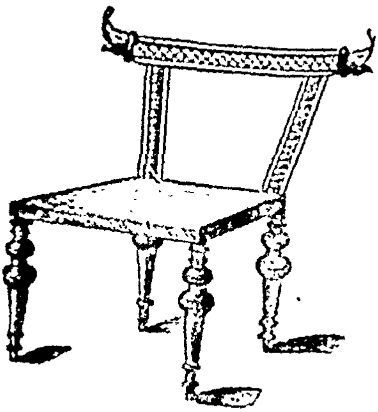
No. 99.

In its general character, No. 100 belongs to the same class with the preceding two; but there is more art and finish in its details. The legs are slender, well-turned, and on the whole as good as those of ordinary chairs of the present day. The ends of the top bar of the back projects



No. 100.

far out, have the usual makara head terminals, and are supported by figures of rampant lions; the fore ends of the arm-rests bend out laterally, and have similar terminals and supports, and the railing is light and chaste. No. 101 belongs to a different class, and resembles a modern chair much more closely than the preceding. Its legs are turned, carved, and finished much more carefully, the back and arm-rests are light and comfortable, and the whole has a modern look



No. 101.

about it. No. 102 looks like a dwarf chair; the construction of its reclining arched back is peculiar, and its seat is semicircular behind, but in its construction there is very little to indicate its old primitive character. The legs are particularly worthy of notice. Joiner's art seems to have made sufficient progress at the time these chairs



No. 102.

were made, and that at the lowest computation about two thousand years ago, to enable the carpenters to fix the legs with sufficient firmness by tenon and mortise joints, to dispense with the necessity of cross bars at the lower end—a provision often found unavoidable for the sake of strength in ill-made furniture of the present day. The fact of such chairs and benches having been made for ordinary use, indicates a much higher state of civilization, than could be assumed if Mr. Fergusson's theory of the nude figures, which frequently occupy them, being of the so-called Dasyu, or aboriginal, race, be accepted. As already stated, these chairs were most likely fitted with stuffed cushions, as they are not unfrequently pro-

vided with pillows near the back; but in the absence of colour and details, it is difficult to make out how they were set off.

The *ordinary mode of sitting on ottomans in saloons in* the company of friends, or on ceremonial occasions, was an erect one with the legs crossed; but when at ease, the reclining position with one arm thrown over the *takyá* was preferred. This latter was also the practice of the Romans, who sat reclined supported by the left elbow, "et cubito remanete presso."* On stools, chairs, and benches, the most common style was to sit with one leg hanging and the other placed on the opposite thigh. Sometimes the legs were crossed; at others, both the legs were allowed to hang in the European style, the feet resting on low stools; and this was evidently reckoned by far the most dignified mode of sitting, for figures of gods are generally so seated; they also occur with one leg hanging and the other folded, but never on the ground, or on a cushion with the legs crossed, as is usual with men in the present day. That persons of rank also adopted the same style, is more than probable, as we find Kaikeyí in the Rámáyaṇa—

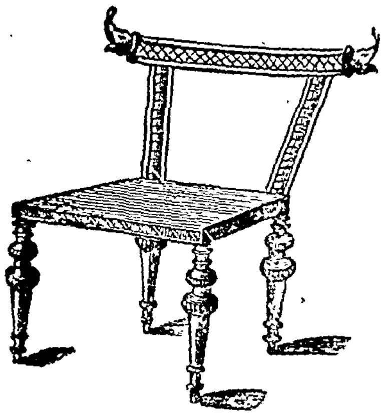
Mode of sitting.

> "When she saw her son, so long away,
> Returning after many a day,
> And from her golden seat in joy,
> Spring forward to her darling boy."†

Other instances of the same description may be easily multiplied. When men of rank are represented seated on sofas, they are attended by servants holding chauris and an umbrella; but in zenana scenes the attendants bear betel boxes and palm-leaf fans. The ordinary attendant in such cases is a pot-bellied, big-breasted, elderly story-teller, seated in front. Sometimes female musicians and songstresses are also delineated. The mistress generally sits cross-legged,

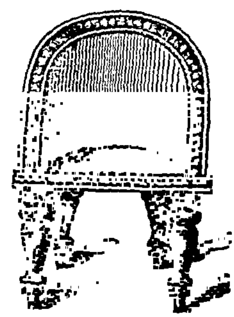
* Hor. I., Od. XXII., 8.  † Griffith's Translation, II., 289.

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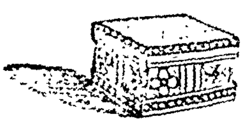
* Hor. I., Od. XXII., 8.

† Griffith's Translation, II., 289.

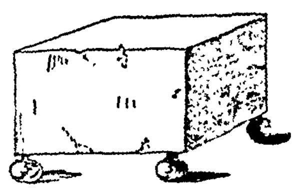
occasionally having in her hand a flat, small, circular mirror with a long projecting handle, a requisite of female toilet which seems to have been a great favourite with ancient Indian belles, and is frequently alluded to in old Sanskrit works.

Footstools.

The footstool, like the *θρῆνυς* of the Greeks, and the *scabellum* of the Romans, was an important article of furniture in Indian households, and frequent mention of it is made in ancient works. For gods and goddesses the most appropriate footstool was a full-blown lotus. It had a charming effect in setting off a piece of sculpture, and typified a most elegant poetical idea. For such personages seats of lotus flowers were not uncommon. For obvious physical reasons, such a style of depicting footstools could not be very congruous for human beings; and yet for the setting off to advantage of seated figures, footstools of some kind or other were absolutely re quired. Accordingly, we see a great number of sculptured-footstools of various designs and patterns. Two of these are shown on the margin. (Woodcuts Nos. 103 and 104.) They are as closely like modern English footstools as can well be imagined. The first is from Amarávatí, and the second, from Bhuvanes'vara. The stool shown in woodcut No. 90, is a form of which counterparts, under the name of *jalachauki*, occur in almost every Bengali house. At s'ráddhas and marriages, such stools invariably form parts of the consecrated gifts. The curious reader will notice many other forms, some of elaborate workmanship, in Mr. Fergusson's work on Tree and Serpent Worship.



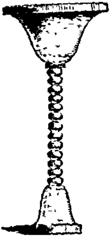
No. 103.



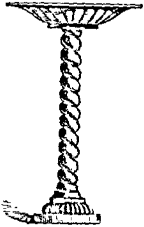
No. 104.

Teapoys.

As stands for betel boxes, drinking cups and the like, the first kind of footstool, (Woodcut No. 90) was, as already described, generally used, but it would seem from some bas-reliefs on the Bhuvanes'vara temples, that another kind of stand was preferred for such purposes in rich houses. It resembled very closely the modern teapoy, but without the characteristic three legs, it being fixed in a thick heavy carved block, which gave it much greater firmness on the ground than modern teapoys can claim. The stems of all the specimens were carved into a series of balls fixed upon each other, or formed into a twisted flute, and the tops carved in various designs. Woodcut No. 105 exhibits a plain specimen, and No. 106 a rich one, both taken from the Great Tower; the latter had a betel box on its top, but in such a decayed state that no trustworthy drawing could be made of it



No. 105.

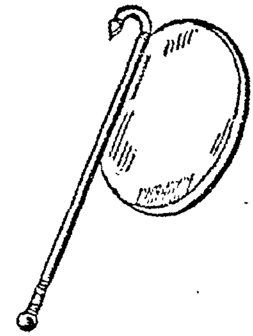


No. 106

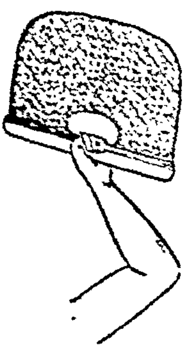
Fans.

In so hot a climate as that of India, a fan is an absolute necessity, and it has been in use from a very archaic period. It does not seem, however, to have, in early times, attained any great excellence in its formation. In sculpture, it always appears as a circular, or an oval, disk of some light material, such as palm-leaf or matting, mounted on a long slender handle, or provided with a haft on one side of the rim, so closely similar to what is manufactured in the present day, that the specimens shown [illegible] next page, (woodcuts Nos. 107, 108, 109), copied from [illegible]

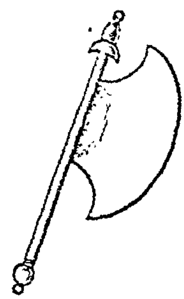
on the Great Tower, may well be taken for modern articles. In Sanskrit works, fans of cloth, peacock's feathers, cane, bamboo, and other articles, are frequently mentioned; but everywhere pre-eminence is assigned to the well known palm, *Borassus flabelliformis*. In treatises on medicine some fans are said to overcome phlegm, others bile, and others heat; thus the *Rájavallabha*, quoted in the *Sabdakalpadruma* of Rájá Rádhákánta Deva: "The palm-leaf fan overcomes disturbances of all the three humours, and is light and agreeable; the bamboo fan causes heat and irritability, and promotes inordinate secretion of the airy and the bilious humours: the cane, the cloth, and the peacock feather fans, overcome disturbances of the three humours; the hair fan is invigorating, &c."* According to some practitioners, the palm-leaf fan promotes phlegm, and for patients suffering from diseases due to an excess of phlegm, a cloth fan, or a palm-leaf fan covered with cloth, is generally recommended



No. 107.



No. 108.



No. 109.

Umbrella.

The umbrella and the chámara are represented very largely, but in no great variety. As insignia of royalty they were held in greater estimation than even the crown; and for goddesses, saints, and men of consequence, they are rarely forgotten. In Europe in the present day, the umbrella, though a highly useful article as a *parapluie* or a *parasol*, carries with it an idea of

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* तालव्यजनगुणाः। त्रिदोषशमनत्वम्। लघुत्वञ्च। वंशव्यजनगुणाः। रुक्षत्वं, उष्णत्वं, वायुपित्तकारित्वञ्च॥ वेत्रवस्त्रमयूरपुच्छव्यजनगुणाः। त्रिदोषनाशित्वम्। वालव्यजनगुणाः। तेजस्करत्वम्।

effeminacy. In ancient times σκιάδειον was held by Aristophanes as a lady's toy, and the Romans assigned it to their gentle women, as an article befitting their delicacy. The Greeks, nevertheless, used it as a mystic symbol in some of their sacred festivals, and the Romans introduced the custom of hanging an umbrella in the basilican churches as a part of the insignia of office of the judge sitting in the basilica. It is said that "on the judgment hall being turned into a church, the umbrella remained, and in fact occupied the place of the canopy over thrones and the like," and Beatian, an Italian Herald, says, "that a vermilion umbrella in a field argent symbolises dominion."* It is also believed that the cardinal's hat is a modification of the umbrella in the basilican churches. Among the ancient Egyptians, the umbrella carried with it a mark of distinction, and persons of quality alone could use it. The Assyrians reserved it for royal personages only. "The umbrella or parasol," says Layard, "that emblem of royalty so universally adopted by Eastern nations, was generally carried over the king in time of peace, and sometimes even in war. In shape it resembled very closely those now in common use; but it is always seen open in the sculptures. It was edged with tassels, and was usually ornamented at the top by a flower or some other ornament. On the later bas-reliefs a long piece of embroidered linen, or silk, falling from one side like a curtain appears to screen the king completely from the sun. The parasol was reserved exclusively for the monarch, and is never represented as borne over any other person."†

The Moslim sovereigns of India were likewise very particular about the use of the umbrella by other than royal personages. But the Indians, like the Egyptians,

* Patents of Inventions, Abridgments of Specifications relating to Umbrellas, Parasols and Walking Sticks, 178, 1866.

† Layard's Nineveh, II., 327.

were not so exclusive. They permitted the *chhátá* to be used by other than kings, though they entertained the idea that the right to bear an umbrella, belonged chiefly to persons of considerable distinction. The king is *par excellence* the *Chhatrapati*, or "the Lord of the Umbrella," and the title is even now held in higher estimation than that of *Rájá* or *Mahárája*. The king of Burmah is proud to call himself "the Lord of Twenty-four Umbrellas," and the Emperor of China carries that number of parasols even to his hunting field. The Mahábhárata makes frequent mention of the umbrella as a mark of royal dignity, and, in the *Dánadharma* section, enjoins the gift of white umbrellas having a hundred ribs, as a religious act calculated to ensure the donor a long residence in the heaven of Indra, respected by gods, heavenly choristers and Bráhmans.* Páṇini mentions the *chhatra*, and gives its derivation (VI, IV, 97), and the Smṛitikáras, both ancient and modern, all follow the Mahábhárata in praising the gift of the umbrella, as an act of great merit.

According to the *Yuktikalpataru* umbrellas are of two kinds, special or royal, and ordinary. The latter is again of two kinds, according as it is handled—*sadaṇḍa* or handleless—*nirdaṇḍa*.† The former was adapted to open and shut at

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* छत्रं हि भरतश्रेष्ठ यः प्रदद्याद् द्विजातये।
शुभ्रं शतशलाकं वै स प्रेत्य सुखमेधते॥
स शक्रलोके वसति पूज्यमानो द्विजातिभिः।
अप्सरोभिश्च सततं देवैश्च भरतर्षभ॥

† विशेषश्चाथ सामान्यं छत्रस्य द्विविधा भिदा।
राज्ञश्छत्रं विशेषाख्यं सामान्यं चान्यदुच्यते॥
सदण्डञ्चाथ निर्द्दण्डं तज्ज्ञेयं द्विविधं पुनः।
सदण्डं तत्र विज्ञेयं सारणाकुञ्चनात्मकम्॥
दण्डः कन्दं शलाकाश्च रज्जुर्वस्त्रञ्च कीलकः।
षड्भिरेतैः सुसन्दिष्टैश्छत्रमित्यभिधीयते॥
दिगष्टषट्चतुर्हस्तदीर्घो दण्डो युगक्रमात्।
षड्वाणवेदनयनवितस्त्या कन्द उच्यते॥

pleasure. Its principal parts were the stem, sliding frame, ribs threads, cloth, and pin. The stem or handle, in a well-made umbrella, should be in the present age four cubits long, the sliding frame two spans, the ribs three cubits, and the cloth twice the length of the ribs. The pin, which supplies the place of the modern spring to lock the sliding frame, is reckoned at eight fingers.

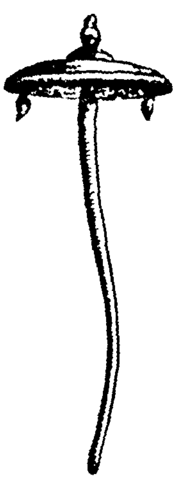
These proportions, however, should, in the opinion of the author under notice, vary according to the rank of the owner. Rules are also given by him for royal umbrellas of various kinds. An umbrella with the stem and frame of choice wood, and of ribs of selected bamboo, and thread and cloth of a red colour, is good for kings. It is called *Prasáda.* The *Pratápa* is made of a blue stem and cloth, with a golden top

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शतान्यशीतिः षष्टिश्च चत्वारिंशद्युगक्रमात् ।
शलाकाः षट्पञ्चवेदत्रिहस्तैः सम्मिताः क्रमात् ॥
विशुद्धकाष्ठस्य तु दण्डकन्दौ तथा शलाका च पि शुद्धवंशजाः ।
रज्जुश्च रक्ता वसनञ्च रक्तं छत्रप्रसादं नृपतेर्वदन्ति ॥
प्रसादमिति प्रसादार्हं ।
नीलो दण्डश्च वस्त्रश्च शिरः कुम्भस्तु कामकः ।
सौवर्णं युवराजस्य प्रतापं नाम विश्रुतम् ॥
चान्दनौ दण्डकन्दौ चेत् शुक्ले रज्जुवाससी ।
छत्रं मनोहरं राज्ञां स्वर्णकुम्भोपशोभितम् ॥
शुक्लानि रज्जुवासांसि स्वर्णकुम्भस्तथोपरि ।
इदं कनकदण्डाख्यं छत्रं सर्वार्थसाधकम् ॥
दण्डकन्दशलाकाश्च शुद्धस्वर्णेन निर्म्मिताः ।
कीलकं स्वर्णघटितं चशुक्ले रज्जुवाससी ॥
कुम्भादिरथ हंसादिश्चामरादिर्यथाक्रमम् ।
कुम्भादावथ हंसादौ नवरत्नानि रचयेत् ॥
द्वात्रिंशन्मौक्तिकी माला द्वात्रिंशत्तत्र दापयेत् ।
सर्वोपरि वज्रजातिं विशुद्धं हीरकं न्यसेत् ॥
दण्डान्ते कुरुविन्दांश्च पद्मरागांश्च विन्यसेत् ।
स्वामिहस्तैकमानेन चामरः सित इष्यते ॥
इत्ययं नवदण्डाख्यश्छत्रराजो महीभुजाम् ।

and hinge; it is the most appropriate for princes. If the stem and slide be made of sandal-wood, and the threads and cloth be of a pure white colour and the top be surmounted with a golden *kalasa* or knob, the umbrella would be most auspicious for kings. It is called *Kanakadaṇḍa*. The most important, however, was the one which was named *Navadaṇḍa*, and recommended to be used on great state occasions, such as coronations, royal marriages, &c. Its stem, sliding frame, ribs and lock-pin, were made of pure gold; its cloth and strings of choice colour, and it was decorated with golden knobs, figures of ducks and cars, and fringes of thirty-two strings of pearls, each formed of thirty-two beads. Its top used to be surmounted with a pure white brilliant, and the lower end of the stem with a ruby and a cornelian, and its most appropriate appendage was a tassel of yak tail, one cubit long.

The Agni Puráṇa (C. 224) does not enter into any great detail, but recommends other materials besides cloth for the construction of royal umbrellas. According to it, "it is conducive to the good of princes to have their umbrellas made of the feathers of geese, or of peacocks, or of parrots, or of herons *(vaka)*; but they should not be made of feathers of various kinds mixed together. The colour of the umbrella, when intended for the use of Kshatriyas, should be white, and when for that of Bráhmans, other than of that colour. Its handle should be made of a cane from three to eight joints in length." The Brihat Sañhitá recommends the feathers of geese, fowl, peacocks, and cranes *(sáras)*, as also new cloth, as the best materials for the covering of white umbrellas, the decorations to consist of pearl fringes, garlands and crystal mountings, the handle being of gold, six cubits long, and divided into seven or nine sections, and the area one-half the



No. 110.

length of the handle. For crown-princes, queens, generalissimos and chief judges, the haft should be reduced half a cubit, and the area, to be two and a half cubits. For ordinary people, the umbrella may be of cloth or peacock's feathers, according to choice, the shape being square, and the handle rounded.*

The woodcut in the margin, No. 110, represents the only kind of chhátá that has been met with in sculpture; it has two tassels of yak's tail for ornaments. The sliding frame is visible in some specimens, but not in so distinct a form as to enable one to make out its exact character. From Layard's drawings, it would seem that the Ninevite umbrella had a sliding frame.

Chámara.

The *chámara* or fly-flapper reckons next in importance to the umbrella, among royal insignia. It is frequently referred to in Sanskrit works, and the *Yuktikalpataru* of Bhoja Rájá dwells on it at great length. According to it, there were two classes of chámaras in use in former times, one "mountain-born," and the other "sea-born." "The former were made of the hair of cattle common on the Meru, the Himálaya, the Vindhya, the Kailása, the Malaya, the Udaya, the Asta, and the Gandhamádana mountains. The chámara of the Meru mountain was of a deep yellow colour; that of the Himálaya, white; that of the Vindhya, white and dense; that from Kailása black and white mixed; that from Malaya, white and yellow, mixed; that from Udaya, blood-red; that from Asta, blue and white shades mixed; and that from Gandhamádana, sometimes black, and sometimes pale yellow."† Of these varie-

* Brihat Sañhitá, p. 377.

† देवैश्चमर्यः किल वालहेतोः सृष्टा हिमक्ष्माधरकन्दरेषु।
आपीतवर्णाश्च भवन्ति तासां कृष्णाश्च लाङ्गूलभवाः सिताश्च ॥१॥
स्नेहो मृदुत्वं बहुवालता च वैशद्यमल्पास्थिनिबन्धनत्वम्।
शौक्ल्यञ्च तेषां गुणसम्पदुक्ता विद्धाल्पलघ्वानि न शोभनानि ॥२॥
अध्यर्द्धहस्तप्रमितोऽस्य दण्डो हस्तोऽथवा रत्निसमोऽथवान्यः।
काष्ठात्मभात्कनकरूप्यपुष्पाद्यैर्विचित्रैश्च हिताय राज्ञाम् ॥३॥

ties, those which had long, light, bright and dense hair, were reckoned the best, and those which had short, heavy, discoloured and dull hair, were condemned as bad. The first set of qualities ensured to the owner of the chámaras possessing them, long life, great valour, fame and enduring prosperity, while the second set brought on shortness of life, disease, sorrow and death.*

The sea-born chámaras are said to come from the seven Pauráṇic seas. The animals which yield them are believed to dwell in those seas, and marine animals bite the bushy part off from their tails and cast them on the shore, where fortunate people collect them. Each sea has its own peculiar kind of chámara, and the author describes them in detail. He adds that the most characteristic quality of the mountain-born chámara, is the ease with which it burns when thrown on the fire, and the peculiar *mis mis* sound which it produces when burning. The sea-born chámara does not

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* अभिषेके विवाहे च ग्रहाणां प्रीतिवर्द्धनः ।
मेरौ हिमालये विन्ध्ये कैलासे मलये तथा ॥
उदयेऽस्तगिरौ चैव गन्धमादनपर्वते ।
एवमेतेषु शैलेषु याश्चमर्य्यो भवन्ति हि ॥
तासां बालस्य जायेत चामरेत्यभिधा भुवि ।
आपीताः कनकाद्रिजा हिमगिरेः शुभ्रायता विन्ध्यजाः
कैलासादसिताः सिता मलयजाः शुक्लास्तथा लिङ्गजाः ।
आरक्ता उदयोद्भवास्तरमजा आमीलशुक्लत्विषः
कृष्णाः केचन गन्धमादनभवाः पाण्डुत्विषश्चामराः ॥
दीर्घता लघुता चैव स्वच्छता घनता तथा ।
गुणाश्चत्वार इत्येते चामराणां प्रकीर्त्तिताः ॥
खर्वता गुरुता चैव वैवर्ण्यं मलिनाङ्गता ।
दोषाश्चत्वार इत्येते चामराणां प्रकीर्त्तिताः ॥
दीर्घे दीर्घायुराप्नोति लघौ भीतिविनाशनं ।
स्वच्छे स्याद्धनकीर्त्तिभ्यां घने स्युः स्थिरसम्पदः ॥
खर्वे खर्वायुरुद्दिष्टं गुरुर्गुरुभयप्रदः ।
विरले रोगशोकाभ्यां मलिनं मृत्युमादिशेत् ॥

easily take fire, but when it does burn, it emits profuse, dense smoke, and produces a crackling sound like *chaṭ chaṭ*.† It is evident that by the mountain-born chámara the author refers to the tail hair of the Yak, Gour, Gayal and other bovine animals which continue even to this day to yield chámaras of various kinds; but what he means by sea-born chámaras, I cannot make out; and yet from the details of their colour, length, density and sound produced when burning, it is obvious that he alludes to some imported articles which he had seen. Of these several kinds of chámaras the Brihat Sañhitá notices only the yak chaury, which, it says, is sometimes yellow, sometimes white, and sometimes black, the best being that which is white, glistening, soft, dense, beautiful, and enclosing only a few small tail bones. Its handle may vary in length from a span to a cubit; it should be made of some choice wood, mounted with gold, silver, and jewels.*

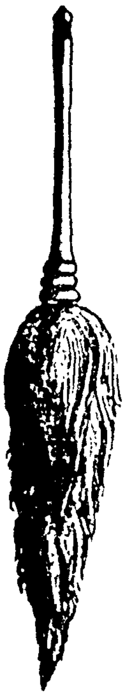
Of the handles appropriate for the various kinds of chámaras, the articles of which they should be made,—gold, silver, and the like;—the mountings they should have,—jewellery of various kinds;—their thickness and length with reference to the respective ranks of the persons for whom they are to be made, the author also gives elaborate descriptions; but they are not sufficiently interesting to be worth translating. The Smṛitis also describe various kinds of chámaras, and speak of the merit of presenting them to Bráhmaṇs on particular occasions, but I shall forbear to quote from them, as it is impossible to identify in sculpture the different varieties mentioned by them. The article itself is frequently met with in sculpture, and represented as a mass

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* [illegible] ।
[illegible] ॥
[illegible] ।
[illegible] ॥

† [illegible]

of flowing hair mounted on a handle more or less ornamented



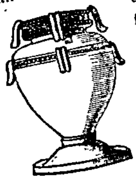
No. 111.

The woodcut on the margin (No. 111) shows the typical form, but the mass of hair of which it is formed is not always made of a uniform thickness. In some specimens, the hair is short, but thick-set and very bushy; in others it is long, flowing and light. The pellicles of the tail feathers of peacocks, and the crested tops of those feathers were also used in making chámaras; but I have not seen them delineated in sculpture, nor have I noticed any mention of horse-hair as a material for chámaras.

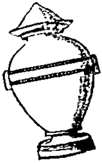
Domestic vessels, utensils, &c.

Of household vessels and utensils, the sculptures of Bhuvanes'vara represent but little. They are subjects which the domestic economy and the religious obligations of the Hindus, studiously drove to the back-ground, and it is not to be expected that they would occupy any prominent position in sculptural decoration. Even in that great sanctuary of ancient art, the sacred land of Greece, where the taste of the people and the ingenuity of artists endowed everything with the halo of beauty, the number and variety of domestic vessels to be seen in sculpture is extremely limited. There was, however, one exception, and it referred to the class which included vessels for fluids. In a country where drinking wine was prevalent and fashionable, vases, and tazzas, and goblets could not but attain some eminence, and the exquisite perfection to which they attained, has hitherto claimed the highest meed of praise. In India even this class of vessels has not attained the distinction which they deserved. With the exception of the *kalas'a* or jar, there is no vessel for fluid which is worthy of notice for the beauty of its form, or the elaboration and art in its finish. Even the kalas'a as a domestic vessel has no claim to any æsthetic excellence. In sculpture, however, it

has been treated with great taste and elegance. As the crowning member of temples, it is generally well-conceived and elaborately finished, and the various forms it has assumed under different treatment are all remarkable for taste and beauty. On the temple of Yames'vara, to the west of the Great Tower of Bhuvanes'vara, there are at least fifty different varieties of kalas'as, many of which can be placed besides Grecian and Roman vases without reflecting any discredit on the taste of their artificers. Woodcut No 112, from this temple, represents a typical figure, and its elegant outline and chaste ornamentation will doubtless commend it to the approbation of connoisseurs. Woodcut No. 113 is from the top of the Great Tower, and is also a typical specimen on the model of which most of the crowning kalas'as of Bhuvanes'vara temples have been fashioned. Jars for the storage of water were formed on the same model, but they had no broad base to rest upon, and, in the majority of instances, their height did not exceed their breadth, and accordingly they looked dumpy.



No. 112.



No. 113

Of smaller vessels for water, woodcut No. 114 shows a remarkable specimen from the Great Tower; it is a water carafe or goglet, in which water was served out, or kept for ready use. In Calcutta, a vessel somewhat similar to it was in use until thirty years ago, when it went out of fashion. (Woodcut No. 115). It was made of metal,



No. 114



No. 115.

of the *saraka*, and the name [illegible] cup for drinking wine was [illegible] the Tantras limit its capacity [illegible] largest containing barely [illegible] the liquor drunk was generally [illegible] that would be convenient. [illegible] the largest was just of the same [illegible] wine glass, and the smallest a liqueur glass. [illegible] bets, and other articles of food [illegible]



No. 122.



made of a larger size. [illegible] is shown in woodcut No. [illegible] is remarkable as being [illegible] and not circular, as [illegible] are. Woodcut No. [illegible] large bowl such as is now used for milk [illegible] drunk in large quantities. No. [illegible]



No. 124.



No. [illegible]

bowl designed for holding solid food; it occurs in the hand of Ganes'a in the Great Tower, and is represented holding a number of ball-shaped sweetmeats (*[illegible]*) [illegible] elephantcephalic divinity is leisurely taking [illegible] The betel-box and spittoon have already been [illegible] pots with a spout on one side, (*Sk. [illegible]*) [illegible] at Bhuvanes'vara, and a vessel very like a [illegible] at Sánchi. (Woodcut No. 125.) It was used for [illegible] holy water before a sacred procession, even as [illegible] the present day. Ás'valáyana recommends [illegible] as appropriate for the sepulchre of relics of [illegible]

* [illegible] परमेश्वरि ।
[illegible] ॥

Tangible evidence is wanting to show what these vessels were made of. The bulk of them, doubtless, were of baked clay, or terra cotta, such as are now so common in every part of India. In the Ṛig Veda, frequent mention is made of earthen cooking pots *(kapálas)*, and for the dressing of the *purodása* cake, the *Chhándoga-paris'ishṭa* recommends hand-made platters as purer than those turned on the potter's wheel.* The practice of using fresh pots on every separate occasion, a practice which was also observed by the Buddhists, and is noticed in the Maháwanso,† gave great importance to their manufacture. Manu, Parásara and others assigned to a particular mixed caste, the issue of a garland-maker *(málá-kárá)* by a frail daughter of a blacksmith, the kumbhakáras,‡ the special vocation of fashioning earthen pots. References are also not wanting to wheels for the formation, and kilns or furnaces for the baking, of such vessels. From descriptions accessible, it is probable that the old wheel did not differ from what was in use in Egypt§ in former times, and what we are familiar with in the present day.

Clay, however, was not the only material in use for the fabrication of domestic vessels in ancient times. The Ṛig Veda alludes to golden cups; and silver, copper, brass and bronze, which were well-known and used in the formation of weapons, were, it is to be presumed, not neglected. The Sútras and the Mahábhárata, however, leave no doubt on the subject: they frequently refer to vessels of other than gold

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* आसुरेण तु पात्रेण यत्र दद्यात् तिलोदकं।
पितरस्तत्र नाश्नन्ति दशवर्षाणि पञ्च च ॥
कुलालचक्रघटितमासुरं मृण्मयं स्मृतं।
तदेव हस्तघटितं स्थाल्यादि दैविकं भवेत् ॥ श्राद्धतत्त्वं।

† *Maháwanso, B. C. 161*, Ch. XXIX., *p. 173*.

‡ The Brahmavaivarta Puráṇa raises their status by calling them the issue of Vis'vakarmá by a S'údráṇí.

§ Wilkinson's Ancient Egyptians, *III.*, p. *164*.

and clay. Tvashṭá, the Vulcan of the Hindu pantheon, was the most celebrated artificer of metallic arms, but the Ribhús greatly excelled him in the formation of sacrificial vessels of wood and metal, and on one occasion Tvashtá is said to have sought to slay his rivals (IV. 33, 5, 6), and on another, "to have applauded their design, and admired the brilliant results of their skill."* In a mediæval work, the *Kálika Puráṇa*, plates made of gold, are described to remove excesses of the three humours, and promote the strength of vision; those of silver, favourable to vision, and inimical to bile, but calculated to increase the secretion of wind and phlegm; those of bronze, agreeable and intellectual, but favourable to undue excitement of blood and bile; those of brass, wind-generating, irritating, hot and heat and phlegm-destroying; those of magnetic iron; most beneficial in overcoming anasarca, jaundice and anæmia; those of other stones and clay are inauspicious; those of wood wholesome, but phlegm-generating; those of leaves, wholesome, invigorating and poison-destroying."† The *Yuktikalpataru* recommends that drinking cups for royal personages should be made of gold, silver, crystal or glass;‡ and other authorities are equally precise on the subject.

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* Muir's Sanskrit Texts, V. p. 226.

† दोषहृद्दृष्टिदं पथ्यं हैमं भोजनभाजनम् ।
रौप्यं भवति चक्षुष्यं पित्तहृत् कफवातकृत् ॥
कांस्यं बुद्धिप्रदं हृद्यं रक्तपित्तप्रमादजम् ।
पैत्तलं वातकृद्रूक्षमुष्णं कृमिकफप्रणुत् ॥

आयसे कान्तपात्रे च भोजनं सिद्धिकारकम् ।
शोथपाण्डुहरं बल्यं कामलापहमुत्तमम् ॥
शैलजे मृण्मये पात्रे भोजनं श्रीनिवारणम् ।
दारुद्भवे विशेषे यद्रुचिदं श्लेष्मकारि च ।
पात्रं पत्रमयं रुच्यं दीपनं विषपापहृत् ॥

‡ तत् पानपात्रं भूपानां तज्ज्ञेयं चषकं बुधैः ।
कानकं राजतञ्चैव स्फाटिकं काचमेव च ॥

Reference has already been made to the knowledge which the Hindus had of glass as a material for the fabrication of ornaments, but from a passage in the work above-quoted, it appears that it was also used for drinking cups or tumblers, the physiological effect of drinking water from vessels of glass being described to be similar to that of vessels made of crystal.* What this glass was made of, I cannot ascertain from any Sanskrit work, but according to the opinion of Pliny, already quoted (ante. p. 101), it was made of pounded crystal, and was therefore superior to glass of all other countries. That this substance was the *lithia diaphanys* of the Greeks, there are many reasons to believe,† and Mr. Vincent, the editor of Arrian, says, "that clear or flint glass assumed its name from 'Υάλη, crystal, is still more apparent from a passage of Diodor, Sic. Lib. ii., p. 128, ed. Wessel, where mention is made of both sorts, the factitious and native 'Υελον' as he writes it. The glass coffin of Alexander is called 'Υαλίνη' by Strabo."‡

There was most probably another substance, porcelain, which was to some extent used in the formation of drinking cups and other domestic vessels, for there is little reason to doubt that the Murrhine cups, for which such fabulous prices were paid, were made of oriental porcelain, which, according to the Periplus, was "brought down from the capital of Guzerat, Ozênè, (Ougein) to the port of Barygáza or Baroach." "All this," adds Vincent, "seems to confirm the opinion that it was porcelane procurable in India at the time, as it now is; and that it was brought into Egypt by the ships that went to India."§ "Elsewhere," he says, "the mention of Carmina by

* जलपात्रन्तु ताम्रस्य तदभावे मृदो हितम् ।
पवित्रं शीतलं पात्रं घटितं स्फटिकेन यत् ।
काचेन रचितं तद्वत् तथा वैदूर्य्यसम्भवम् ।

† Arrian's Periplus of the Erythrean Sea, II., Ap. p. 45.

‡ Ibid. II., Ap. p. 48.

§ Ibid. II., Ap. p. 40.

Pliny, as the country where the murrhina were obtained, favors the supposition of procuring these vessels from India; for the communication of Carmina with Scinde and Guzerat is almost immediate, and certainly prior to the navigation from Egypt to that coast. But in Guzerat they were obtained, when the author of the Periplus was employed in that trade; and their arrival at the market of Baroach, from the interior of India, may induce us to suppose that they came into India from the north."

Another material which was used in the manufacture of domestic vessels was leather. In the time of the Rig Veda leather masaks for water were well known, and Indra is praised as piercing the rain-confining skins or masaks of the cloud.* Bottles of the same material also were evidently in common use, for Agastya in his poison-neutralizing mantra, says, "I deposit the poison in the solar orb, like a leather bottle in the house of a vendor of spirits."† In the Laws of Manu, masaks for water are alluded to under the name of *driti*, and its peculiar form with the four feet left intact is pointed out.‡ Directions are also given for the purification of leather articles.§ Other Smṛitis ordain that oleaginous articles preserved in leather bottles do not become impure by the contact of the impure cow-hide; and in the present day jars of that material are in extensive use in Bengal and the North-West Provinces for the storage of oil and ghi. In the latter place, leather bags are universally used for raising water from wells, and according to the law books of Sankha and Likhita,‖ that water is declared pure which is kept in old leather bottles. Atri¶

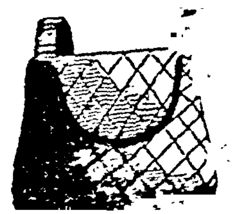
* Wilson's Ṛig Veda, II., 28. | † Ibid II., 204.

‡ Manu, II., v. 99. | § Ibid. V., v. 199.

‖ आपो रूपरसगन्धवत्यः परिपूता जीर्णचर्म्मकरण्डकैरभ्युद्धृताः। चर्म्मकरण्डकः चर्म्मपुटः। शङ्खलिखितौ।

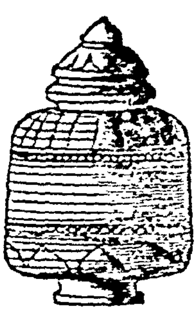
¶ शुचि गोतृप्तिकृत्तोयं प्रकृतिस्थं महीगतम्।
चर्म्मभाण्डैस्तु धाराभिस्तथा यन्त्रोद्धृतं जलम्॥
अत्रिः।

is likewise of the same opinion, and adds that flowing water, and that which is raised by machinery, are not defiled. The use of such words, as *charmanta*, *charmapatti*, *váratra*, *chasa-bandha*, &c., in old Sanskrit works indicates that straps, bands and strings of leather were in common use, and sails were also made of leather or hide. No articles of the kind, however, have been seen at Bhuvanes'vara. In the boat scene at Sánchí, leather masaks are used for swimming,* and their counterparts may be seen in Layard's plates of Assyrian sculptures.† Of leather bottles and jars no trace can be found in sculpture, but a remarkable article, probably of leather, occurs on an attendant on a lady of rank from Bhuvanes'vara now in the Indian Museum; it is a courier bag of a check pattern with a flap, slung from the left shoulder. (Woodcut No. 126.) I have seen nothing of the kind in any other sculpture in India.



No. 126.

Of boxes, scrutaires, and the like, I have also seen nothing. The *Manjusá*, or trunk made of cane, is frequently referred to in Sanskrit works; but what it was like I cannot ascertain. Woodcut No. 127. appears to me to be a specimen of the kind. It is an ornamented casket for jewellery or other toilet requisites, and was probably copied from a cane-made original. In Bengal, even to this day, the most important element of the trousseau is a small casket of wicker work with cloth lining and silver or kouri-shell mountings, very much like the one under notice, and intended to hold pomades of bees'-wax, red-lead or *sindur*, combs,



No. 127.

* Tree and Serpent Worship, plate XXXI.

† The Monuments of Nineveh, plates XV and XVI.

Kás'ikhaṇḍa, Chap. IV.

plaited hair strings, stibium, and other nicknacks of feminine use. The most important of these articles in the estimation of Bengali ladies is the red-lead, because with it is associated their married condition. According to a verse in the *Márkanda Puráṇa*, "no faithful wife who desires the longevity of her husband, should ever forego turmeric, saffron, redlead, stibium, boddice, betel leaf, auspicious ornaments, dressing of the hair, chignons, bangles, and earings."* But modern belief is that red-lead and an iron bracelet are the only two things which no married women should be without for a moment, and the rest are ornaments which may or may not be put on according to choice. The red-lead is used for marking one or more spots on the top of the forehead, just where the hair is parted along the mezian line. Formerly, paper stencils, representing elaborate floral devices, were in use for marking the forehead with sindúr or sandal paste, and they accordingly found a prominent place in the dressing case, but, except for brides on the day of marriage, they are not thought of now.

On the Great Tower a scene represents churning, and the instrument delineated is identically the same with which we are now familiar, a churning stick, worked in a large earthen pan, with a twisted rope held in the two hands of a milk-maid. The stick is kept *in situ* by two rings attached to an adjoining post. A kitchen scene at Sánchi† exhibits a winnowing fan, *kula*, a wooden pestle and mortar, *okhli*, (both very like what is common now); a curry stone, *sila*,

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* हरिद्रां कुङ्कुमञ्चैव सिन्दूरं कज्जलं तथा।
कार्पासकञ्च ताम्बूलं माङ्गल्याभरणं शुभम्॥
केशसंस्कारकबरीकरकर्णविभूषणम्।
भर्त्तुरायुष्यमिच्छन्ति दूषयेन्न पतिव्रता॥

† Tree and Serpent Worship, plate XXXV.

with feet and muller, and a board or table mounted on four tall legs used evidently for rolling bread, *cháki.* The grouping is thoroughly life-like and oriental. Adverting to it, General Cunningham, in his Bhilsa Topes, says: "This scene is one of the most curious and interesting of all the Sánchi bas-reliefs. Women only are employed in all the domestic occupations: in drawing water, in husking and winnowing the corn, and in the cooking of food. The last fact is noticed by Quintus Curtius, who, speaking of the Indian king, says: 'Women prepare his food.' The mortar and two-handed pestle are the same as those in use at the present day in India. The mortar *(okhli)* is exactly the same as the Greek ἴγδη, and the Roman *pila;* and the pestle *(musár)* is the same as the Greek κόπανον, and the Roman *pilum.* The primitive method of winnowing represented in the above scene is still used in India; and it recalls one of the blessings of the prophet promised to the children of Israel: 'The oxen, likewise, and the young asses that ear the ground, shall it clean provender which hath been *winnowed with the shovel and with the fan.*' Bishop Lowth reads, 'winnowed with the *van* and the *sieve.*' But *shovel* is the nearest descriptive word in English for the present winnowing-basket, which does not seem to differ, even in the slightest degree, from the ancient one represented in the bas-relief."*

Writing materials.

Writing is not a subject which can be expected to be shown in sculptures, except in the form of inscriptions. There are, nevertheless, indications of both reading and writing in groups of human figures which are unmistakable. One in particular deserves special mention. It represents a youthful maiden standing under a tree and writing something with a reed pen on an oblong tablet. The figure is now in the Indian Museum

* Bhilsa Topes p. 205.

Society, and a sketch of it is shown in woodcut No. 128. Looking to the practice, common among the Uriyás of the present day, of writing with an iron style on palm leaves, it might be said that the statue does not represent writing, but drawing. The practice, however, of writing with white chalk on black wooden tablets, or with ink on white tablets, which, among the grocers of Bengal and in the village schools of Northern India, is still universally prevalent, was well known in ancient India, and the tablet did then occupy, as it does now, the place of the modern European slate and the box-wood tablets of ancient Greece, on which pupils practised the art of drawing with the *graphis* or the *penicillus.* Raghunandana, in his *Vyávahára Tattva*, quotes a verse from the *Sañhitá* of Vyása, which says, "the first draft of a document should be written on a wooden tablet, or on the ground, and after correction of what is redundant and supplying what is defective, the record should be engrossed on leaf, or other material, on which it is permanently to remain."* And there is no reason to doubt that the Uriyás were familiar with it. The practice of writing on the ground or on boards, is common now in every part of Orissa. The pen shown in the sculpture is a plain cylindrical rod with a pointed end, but without the flat cutting top so peculiar to the modern Uriyá style. For materials for pens the *Yoginí Tantra* condemns bamboo twigs and bronze styles as unfortunate. Copper styles are better as leading to wealth, but the gold is the best as the most auspicious; the reed pen *(vrihannala)* is, however, preferable as conducive to intelligence. References are also made to ornamental wood and brass as



No. 128.

* पाण्डुलेख्येन फलके भूमौ वा प्रथमं लिखेत् ।
ऊनाधिकन्तु संशोध्य पश्चात् पत्रे निवेशयेत् ॥

materials for pens, and they are required to be cylindrical and from eight to ten fingers long,* but without any flattened top, and the pen in the sculpture corresponds with this rule. It is worthy of note that Uriyá women of the present day are more proficient in reading and writing than their sisterhood in Bengal. Even the courtezans of Cuttack attach more importance to education than their representatives in Calcutta. When I visited the place two years ago, they had three schools for the education of their daughters, in the Bengali language, and those institutions were well attended. The like of them I have not seen in Bengal or the North-Western Provinces. The necessity for these schools arises from the circumstance of Bengali songs being held in great esteem by the higher classes of the people, and it being held *infra dignitate* on the part of dancing girls to sing other than Bengali songs. A similar feeling in Bengal makes the dancing girls think it a point of honor here always to sing Urdu songs, and accordingly to learn to read and write Urdu. I cannot venture to say if it is a feeling of that description that makes Italian songs most fashionable in the musical circles of Europe; but certain it is that in every one of these cases, that which is not easily understood, is preferred to what comes home to the admirers of music. Should the sculpture be taken for a representation of a lady engaged in drawing

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* वंशसूच्या लिखेद्यो तस्य हानिर्भवेद् ध्रुवम्।
ताम्रसूच्या तु विभवो भवेन्न तत् क्षयो भवेत्॥
महालक्ष्मीर्भवेन्नित्यं सुवर्णस्य शलाकया।
वृहन्नलस्य सूच्या वै मतिवृद्धिः प्रजायते॥
तथा अग्निमयैर्देवि पुत्रपौत्रधनागमः। अग्निमयैस्त्रिकाष्ठमयैः
रौप्येन विपुला लक्ष्मीः कांस्येन मरणं भवेत्॥
अष्टाङ्गुलप्रमाणेन दशाङ्गुलेन वाथवा।
चतुरङ्गुलसूच्या वा यो लिखेत् पुस्तकं शुभे॥
तत्तदक्षरसङ्ख्या स्वल्पायुर्याति वै दिने।

or painting, it would still be of great interest as an index to the social condition of the people, and a lithic proof of the descriptions which make Sítá, U'shá, Ratnávalí, and other ancient heroines proficient in painting likenesses.

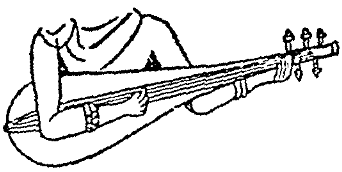
Musical Instruments.

Looking to the number of works which have been written on the art of music by the Hindus, the success with which musical notes have been analysed, the different systems which have been adopted for the classification of the national airs and tunes, and the various kinds of instruments which have been noticed in ancient works, it is to be expected that lithic remains of at least some of the instruments of former times should be met with. Nor are they wanting at Sánchí, Amarávatí, and Bhuvanes'vara. Scenes representing concerts are very common at all the three places, but the number and variety of instruments in use in these parties appear, however, to have been extremely limited. Such as they are it would be convenient to notice them in the order in which Indian authors describe them. The classification they adopt is a fourfold one, including: 1, vibratory, *(tata)*; 2, percussive, *(ánaddha)*; 3, pneumatic, *(s'ushura)*; 4, concussive *(ghana)**
instruments. The first class includes all stringed instruments, such as harps, lutes, &c. The 2nd comprises all those instruments in which sound is produced by percussion of skins stretched on hollow vessels, such as drums and the like. Flutes, clarions, trumpets and all other instruments in which sound is produced by blowing come under the third head; and those in which sound is generated by the concussion of solid metal plates are reckoned under the last class.

Of the first class, harps of two kinds are shown

* ततमानद्धसुषिर घनानीति चतुर्विधं ।
ततः वीणादिकं वाद्यमानद्धं मुरजादिकं ॥
वंशादिकन्तु सुषिरं कांस्यतालादिकं घनं ।

at Sánchí and Amarávatí. (Woodcuts Nos. 92 and 129.) But none are to be seen at Bhuvanes'vara, and, indeed, no stringed instrument seems to have been in use there except the *Víṇa*. The Amarávatí harp is in appearance very like the ancient Egyptian instrument, but it was held on the lap in a horizontal position, whereas the latter, when in use, was kept in an upright position on the ground, or on a stool.



No. 129.

The Amarávatí guitar shown on the stone in the Museum of the Asiatic Society, has a sounding board at the lower end, and seven keys, but no bars. The Kalpa Sútra of Kátyáyana notices a harp with a hundred strings, but what it was like I cannot say. Monochords, Bichords, and Trichords are largely described in text-books.

Of percussion instruments, the *dholaka*, played either on one or both sides, is the most prevalent representative to be met with everywhere; and was made of various shapes. Some were of large size with small ends and broad centres, like the *Mridanga* of our day; others less protuberant in the middle, but with broad ends like the *pákhawáj;* others, again, of a very small size. Of the large military drum played with a stick, the *raṇaḍhakká* and the *jayaḍhakká*, with which the heroes of the Rámáyaṇa and the Mahábhárata are said to have inspired their legions with military ardour in the battle-field, no specimen has been met with at Bhuvanes'vara, but a small variety, probably the *tim-timi*, *Anglicé* tom-tom, or the kettledrum, so played, is not rare. The tambourine, *khanjani*, is also met with. At Sánchí the large war drum is common. The ceiling of the Muktes'vara porch has several scenes of concerts, in most of which the central figure is represented singing to the accompaniment of a dholaka and cymbals.

Of pneumatic instruments, flutes with or without lateral blowing holes, pipes and trumpets are the leading forms. Flutes were usually perforated with three to seven holes; the last was probably the highest number, and the player, who could manage so many holes was deemed highly proficient, for we find in the Toy Cart a servant of a courtezan claiming great superiority on that score. He says, "A pretty situation for a man of my talents; for one who can play the flute with seven holes, the *víná* with seven strings; who can sing like a jackass, and who acknowledges no musical superior, except, perhaps, Tamburu or Nárada."*

The conch-shell scarcely deserves to be reckoned as a musical instrument, but as it was so used, and is common at Bhuvanes'vara, it is necessary to name it. It was of the modern shape and used very much in the same way as in the present day.

The conch-shells of commerce are contributed by three different species: *1st, Turbinella rapa; 2nd, Mazza rapa;* and *3rd, Voluta gravis.* Of these the first produces the largest shells, best adapted for wind instruments, in making which the only ingenuity required is to drill a hole at the base in such a manner as not to injure the whorls. When blown through, the wind, passing through the different whorls, produces a loud, sharp, shrill, piercing sound, which spreads far and wide, and by its nature quickly attracts attention. Hence the conch was held in great esteem as a war trumpet. In the present day, it is used as a trumpet in the temples to mark the close of a religious ceremony called *árati*, in course of which lights, napkins, and other articles are turned repeatedly in front of an image, and also at *quasi* religious ceremonies, which the fair sex celebrate to mark particular domestic occurrences. The second species produces the most elongated shells, and they are used for offering water to the gods

* Hindu Theatre, I. p. 93

during the *árati* aforesaid, for bathing the images of Vishṇu, and for lustrations generally. For this purpose no perforation at the base is needed, but the whorls within have to be cut out clean. Occasionally, but very rarely, the whorls are so cut as to represent five consecutive shells, one within the other, and these are described to be so many separate shells coalesced into one, or five separate mouths, *panchamukha*, of one shell. It is held to be particularly sacred. I have seen only one specimen of this kind; but it had only three interior shells. It is generally as high-priced as the abnormal variety called *dakshiṇávarta*, "in which the whorls, instead of running from right to left, as in the ordinary shell, are reversed, and run from left to right." "It is," says Sir Emerson Tennent, "regarded with such reverence that a specimen formerly sold for its weight in gold, but one may now be had for four or five pounds." This high price is due to the virtues ascribed to it in the Puráṇas. One of them, the *Váráha*, says, "He who, going to a river flowing towards the east, performs an *abhisheka* ceremony on himself with a right-handed sankha, purges himself from all sin. He who, in such a river standing up to his navel in water, pours sesamum seed and water profusely on his head from a right-handed sankha, instantly destroys all the sins of his life."* Of the virtues of sankhas generally the *Padma Puráṇa* gives a detailed account. According to it, "He who bathes Vishṇu with the milk of a gold-coloured cow *(Kápilá)* filled in a sankha, acquires more merit than can be attained by performing a hun-

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* दक्षिणावर्त्तशङ्खेन गत्वा प्राक् स्रोतसं नदीम् ।
कृत्वाभिषेकं विधिवत् ततः पापैः प्रमुच्यते ॥
दक्षिणावर्त्तशङ्खेन तिलमिश्रोदकेन तु ।
उदके नाभिमात्रे तु यः कुर्य्यादभिषेचनम् ॥
प्राक् स्रोतस्यां तु वै नद्यां नरस्तत्राम्भसाप्लुतः ।
यावज्जीवकृतं पापं तत्क्षणादेव नश्यति ॥

dred million Yajnas. He who bathes the Great Lord with the milk of other than golden-coloured cows, obtains the rank of Brahmá. Pouring Ganges water into a sankha, he, who bathes Mádhava, saying at the same time "salutation to Náráyana," avoids the evil of all future transmigration. What is the use of bathing in the Ganges for him, who, turning a Sankha filled with water before Kés'ava, pours the water on his own head? He, who offers to Vaishnavas, in a sankha, water mixed with sesamum and tulsi leaves with which the feet of Hari have been washed, acquires the merit of performing a *chándráyaṇa* ceremony."* The *Brahma-vaivarta Puráṇa* says, "Water in a sankha is most gratifying to the gods, and is as holy as the waters of sacred pools, except to Sambhu. The goddess of fortune remains fixed in those places where the music of the sankha resounds. He is bathed in the waters of all the sacred pools, who bathes in water from a sankha. Hari abides in the sankha; wherever there

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* शृणु शङ्खस्य माहात्म्यं सर्व्वपापहरं शुभम् ।
कपिलाक्षीरमादाय शङ्खे कृत्वा जनार्द्दनम् ॥
यज्ञायुतसहस्रस्य स्नापयित्वा लभेत् फलम् ।
पयस्विन्याः शुभं क्षीरं शङ्खे कृत्वा तु नारद ॥
यः स्नापयति देवेशं स गच्छेद् ब्रह्मणः पदम् ।
कृत्वा गङ्गोदकं शङ्खे यः स्नापयति माधवम् ॥
नमो नारायणेत्युक्त्वा मुच्यते योनिसङ्कटात् ।
शङ्खस्थन्तु यत्तोयं भ्रामितं केशवोपरि ॥
निक्षिपेन्मूर्द्धि सततं गङ्गास्नानेन तस्य किम् ।
कृत्वा पादोदकं शङ्खे वैष्णवाय प्रयच्छति ॥
तिलमिश्रं तुलस्या च चान्द्रायणफलं लभेत् ।
नदीतडागजं वारि वापीकूपह्रदोद्भवम् ॥
गाङ्गेयं तद्भवेत् सर्वं कृतं शङ्खे हरिप्रिय ।
गृहीत्वा विष्णुपादाम्बु शङ्खे कृत्वा च वैष्णवः ।
यो वहेच्छिरसा नित्यं स मुने तापसोत्तमः ।
त्रैलोक्ये यानि तीर्थानि वासुदेवाज्ञया मुने ॥
शङ्खे तान्यधितिष्ठन्ति तस्मात् शङ्खं सदार्च्चयेत् ।

is a sankha there is Hari. There also abides Lakshmí, and evil of every kind flies away from it."*

The fabricators of bracelets make no distinction of these three varieties, and use them promiscuously for their work. In the "Detailed List of Articles contributed by Bengal to the *Vienna Universal Exhibition of 1873* (p. 89), Mr. Locke, of the Calcutta School of Art, has the following interesting note on the subject: "The Shánkháris, or shell workers at Dacca, distinguish the several shells and their various qualities by the names *Titkuri*, *Páti*, *Lálpáti*, *Álabelá*, *Dhala*, *Kulai*, and *Shurti*: the Titkuri" (that is, those imported from Titicorin) "being the best in quality of grain, lustre, and suitability for fine cutting and delicate finish. There is *considerable variety in the patterns of these* sankha bracelets, from the rude broad flat ring, to the thin delicate annulet, rounded, or with notched or beaded edges, carved with tigers' heads, enriched with ornamental incising, and illuminated by touches of tinsel, lac-colour, gilding, &c." It should be noticed, however, that those bracelets which are made of entire pieces or annulets cut out of the shell, require the last named species, which from its size yields rings just large enough for the human wrist. The first two varieties are too large for such annulets, and their chips and cuttings are therefore used only in inlaying. Their superior density and gloss adapt them well for this purpose. It should be borne in mind, also, that the different species vary greatly in size, according to age, and it is often difficult to identify them in the dry state.

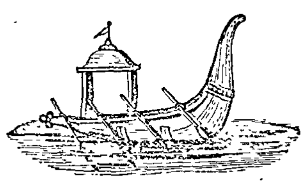
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* प्रशस्तं शङ्खतोयञ्च देवानां प्रीतिदं परम् ।
तीर्थतोयस्वरूपञ्च पवित्रं शम्भुना विना ॥
शङ्खशब्दो भवेद्यत्र तत्र लक्ष्मीश्च सुस्थिरा ।
सः स्नातः सर्वतीर्थेषु यः स्नातः शङ्खवारिणा ॥
शङ्खे हरेरधिष्ठानं यतः शङ्खस्ततो हरिः ।
तत्रैव वसते लक्ष्मीर्दूरीभूतममङ्गलं ॥

Of concussion instruments, cymbals, large *(Karatála)* and small *(Mandira)*, are common everywhere, but all of the ordinary modern form. In one instance I noticed, what appeared to me to be, a pair of castanets, such as are in use in the present day, and I think that castanets were not unknown in ancient times in India. They occur among the sculptures of Thebes, and Wilkinson supposes they were not only used in the Egyptian army, but by the buffoons, who danced to their sound."* At Bhuvanes'vara, they are represented on the ceiling of the Muktes'vara temple. The gong *(kán̄s'ya)* is also common, and deserves no notice, and the same may be said of bells which form so important an element in the paraphernalia of workship.

Boats.

That in the time of the Vedas, and for some time afterwards, the Hindus were familiar with ships adapted for sea voyages, is a fact which is now no longer doubted. The frequent mention, in ancient Sanskrit literature, of pearls, which could not have been procured without the aid of boats that could brave the ocean-wave, is of itself sufficient evidence on the subject. But others are *not* wanting. Allusions to the ocean and to ships are numerous even in the San̄hitá of the Ṛig Veda. "The greatness of the Agastyas," is said to be "as profound as the depth of the ocean."† "He, Varuṇa, who knows the path of the birds



No. 130.

* Ancient Egyptians, II., 365.

† Wilson's Rig Veda, IV., 89.

flying through the air, he, abiding in the ocean, knows also the course of ships."* "May Ushas, dawn to-day, the excitress of chariots which are harnessed at her coming, as those who are desirous of wealth (send ships) to sea."† "Do thou (Agni), whose *countenance is turned to all sides*, send off our adversaries, as if in a ship to the opposite shore," (a remarkable prayer for transportation at so early an age). "Do thou convey us in a ship across the sea for our welfare."‡ Again, "Tugra, verily, As'vins, sent (his son) Bhujyu to see, as a dying man parts with his *riches*; but *you* brought *him* back in vessels of your own, floating over the ocean, and keeping out the waters. Three nights and three days, Násatyas, have *you* conveyed Bhujyu in three rapid, revolving cars, having a hundred wheels, and drawn by six horses, along the dry bed of the ocean to the shore of the sea. This exploit you achieved, As'vins, in the ocean, where there is *nothing* to *give support*, nothing to rest upon, nothing to cling to; that you brought Bhujyu, sailing in a hundred-oared ship, to his father's house."§ This story of Bhujyu *is* repeated in a subsequent hymn where the "tossing ocean and swift ships" ‖ are again alluded to. Again, "*you* constructed a pleasant, substantial, winged bark, borne on the ocean waters *for* the son of Tugra, by which, with *mind* devoted to the gods, you bore him up, and quickly descending (from the sky,) you made a path for him across the great waters. Four ships, launched into the midst of the receptacle (of the waters, sent by the As'vins,) brought safe to shore the son of Tugra, who had been cast headlong *into* the waters (by his foes,) and plunged *in inextricable* darkness."¶ *Agni is prayed in* one place "to bestow a boat fitted with oars." The great sage Vas'ishṭha declares, "When I, (Vas'ishṭha) and Varuṇa as-

* Wilson's Rig Veda, I., 65.
† Ibid. I., 128.
‡ Ibid. I., 254.
§ Ibid. I., 306.
‖ Ibid. I., 317.
¶ Ibid. II., 182.

cend the ship together, when we send it forth into the midst of the ocean, when we proceed over the waters with swift (sailing vessels), then may we both undulate happily in the prosperous swing. So Varuṇa placed Vas'ishṭha in the ship, and by his mighty protection made the Rishi a doer of good works."* The Kapinjala bird is said "to foretell what will come to pass, by giving due direction to its voice, as a helmsman guides a boat." In the Introduction to the third volume of his translation of the Ṛig Veda, Professor Wilson says, "The same familiarity with the sea that has been previously commented on occasionally occurs, with sufficient explicitness to leave no doubt of the meaning of the text: thus in one place the rivers are said, 'to rush to the ocean eager to mix with it' (p. 59); and again, 'the rivers disappear in the ocean' (p. 221), where also it is said that 'those desirous of profit are engaged in traversing the ocean,' clearly indicating maritime traffic: the Maruts, or personified winds, are said 'to toss the clouds like ships,' or as the Scholiast amplifies a rather elliptical phrase, as the ocean tosses ships; in another place (p. 425), although the particular expressions may be equivocal, yet it is undeniable that the passage is intended to convey the idea of the crossing of the ocean by certain individuals under the guidance of Indra."† At a later date Manu lays down rules for the guidance of maritime commerce, and the Rámáyaṇa alludes to merchants, who traffic beyond the sea and bring presents to the king (III. 237). In the Mahábhárata mention is made of a large boat provided with machinery, which could defy the hurricane; but it was intended for moving only on a river. Kálidása, in the S'akuntalá, gives the story of the merchant Dhanavṛiddhi, whose immense wealth devolved to the king on the former's perishing at sea, and leaving no heirs behind him; and in

* Wilson's Ṛig Veda, IV. 178.

† Ibid III., p. 16.

the Hitopades'a, a ship is described as a necessary requisite for a man to traverse the ocean, and a story is given of a certain merchant, "who, after having been twelve years on his voyage, at last returned home with a cargo of precious stones." The details of Vijaya Siñha's piratical expedition to Ceylon are familiar to the readers of the history of that island. Arrian alludes to the *Kolandiphontas*, (apparently a corruption of the Sanskrit *Kolántarapota*, "ships for going to foreign shores,") or "large ships on the coast of Travancour, in which the natives traded to Bengal and Malacca," in contradistinction to the *Monoxyla* of Pliny, which was probably the same with the *Sangara* and made of one piece of timber, for coasting and river trade.* Other notices of the sea and ships may be multiplied *ad libitum*, to shew that the ancient Hindus were accustomed to venture out on the "black waters" in search of wealth.

No proof of sea voyages, however, is to be had in sculpture. At Sánchí only two boats have been seen,† one "a rude canoe made up of rough planks rudely sewn together by hemp or string"; and the other, "a stately barge with a long arching prow carved to represent the head and fore paws (winged) of a lion with the beak of a hawk, and the stern shaped like the tail of a fish curved upwards." Such fanciful prows, it would seem, were common enough in former times; for the *Yuktikalpataru* names the heads of lions, buffaloes, serpents, elephants, tigers, birds, frogs and men, as the most appropriate for figure-heads of boats.‡ "Boats not unlike the Sánchí specimen in design," says Mr. Fergusson, "may still be seen opposite the ghats at Benares on festal occasions, on the lakes at Oudypore, or whenever a Hindu palace has a lake attached

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* Periplus of the Erythrean Sea, I., p. 23.

† Tree and Serpent Worship, plate XXXI.

‡ केशरी महिषो नागो द्विरदो व्याघ्र एवच ।
पक्षी भेको मनुष्यश्च एतेषां वदनाष्टकम् ॥

to it."* Both the Sánchi boats, however, appear amidst lotuses, which in this country never grow in the running water of rivers, and are obviously not intended for the ocean. At Amarávati too there are no ships, and at Bhuvanes'vara, no marine or boat scene has come to notice. Considering that the place is situated so near the sea, the total absence of such scenes argues that, at the time, the Hindus had all but entirely retired from the sea. At Puri, the Bhoga Mandapa of the Great Temple represents a boat, but it is evidently intended for a river. (Woodcut No. 130).

*Drinking.*

As already stated (*ante* p.p. 270 f.), drinking vessels are common at Bhuvanes'vara, but they are never shaped like animals' heads as in Assyria and Etruria. Of the nature of the beverages which they contained, nothing can be said. The religion of S'iva, and that of his consort, recognise the use of spirituous liquors as an element of devotion, and it is to be supposed that the people who followed those forms of religion did avail themselves of the license to a considerable extent. Six hundred years before that time, we find that drinking wine and spirits was almost as common among the Indians as it is now in Europe. In the S'akuntalá, when the fisherman, who brought the lost ring to the king, proposed to give to the policemen half of the money he had received as a present from Dushyanta, the Superintendent, joyously accepting the offer, remarked: 'Thou good fisherman, you are an excellent fellow, and I begin to feel quite a regard for you. Let us seal our first friendship over a glass of good liquor. Come along to the next wine shop, and we will drink your health;'† and the whole party agreed to the proposal to make the fisherman

MS. No. 445, in the Library of Mahárájá Jotindramohan Tagore, Bahadur, of Calcutta, Fol. 71 A.

* Tree and Serpent Worship, p. 127.

† William's Translation, p. 154.

stand a treat, saying "by all means." Nothing short of free and undisguised use of spirit by the ordinary people of the country could have justified the poet in introducing such a scene. That the practice was not confined to the lower orders of the people, is evident from the fact of the Superintendent having been a relation of the king. It is also manifest from the Sánchí bas-reliefs, among which more than one lady of high rank may be seen standing in a balcony on the roadside with a drinking cup in her hand, and a maid with a decanter by her side ready to replenish it. In the garden scene two of the lovers have tazzas in their hands with an urn before them, clearly indicating indulgence in something more potent than water or sherbat. Commenting on this scene, Mr. Fergusson justly observes, "We ought not to be surprised that drinking should be a favourite indulgence in these days. The Mahábhárata is full of drinking scenes, and many of its episodes, turn on the results of intoxication. Even the gods in those days got drunk on soma juice; why not poor mortals? In addition to this, we must bear in mind that though the Hindus of the plains are so remarkable for their temperance, all the hill tribes drink joyously to the present day. No ceremony, civil or religious, takes place without drinking and dancing, and the festival generally is brought to a close by all—the men, at least—being so drunk as to be unable to continue it."* No doubt the S'ástras condemn indulgence in wine, especially by women, as sinful; but neither the anathema of the moralist, nor the ordinance of the lawgiver, seems to have put a stop to the manufacture of spirituous liquors in the country, or to the importation of valuable foreign wines such as are mentioned in Arrian's Periplus, which were evidently destined for the use of men of wealth and consequence. The essay further on, on "Spirituous Drink in Ancient India," will afford full details.

* Tree and Serpent Worship, p. 139.

Arms.

It is usual among European authors to treat the history of arms under four different heads: 1*st*, the age of stone; 2*nd*, the age of bronze; 3*rd*, the age of iron; and 4*th*, the middle ages. An earlier age would be that of wood, for of all artificial arms, a club, or a stick, would suggest itself sooner to a primitive race than a celt of chipped flint; and certain it is that among the many barbarous races still extant in different parts of the globe, the wooden spear and the bow and arrows appear much more universal than celts and stone hatchets. Wood, however, is not lasting, and the earliest relics available being made of stone, the fourfold division is the most convenient for the arrangement of ancient arms in museums and public collections, and to a certain limited extent for the treatment of the subject in historical disquisitions, using the words "age of stone," or "age of bronze," &c., in the same way as geologists use the phrases, the age of reptiles, the age of mammals, &c., implying a prevalence of particular class of objects over, and not the total exclusion of, others. In India, the same arrangement would no doubt be desirable. The number of stone weapons, chiefly celts, knives, and arrow-heads collected in the Indian Museum at Calcutta, fully testifies to the extensive use of such arms by the inhabitants in an historic age; and ancient Sanskrit literature also bears evidence to the fact. The monkeys of Ráma are said to have thrown stone implements against their enemies, and the thunderbolt of Indra (*Vajra, Asani*) was a lithic missile; but hitherto not a single authentic specimen of any Aryan stone weapon has been met with in this country, and bronze arms seem to be all but unknown. From the time of the Ṛig Veda to the present day, wood and iron have been the chief, if not the only, materials employed in the fabrication of offensive weapons; and as both those articles have been used promiscuously at all times, it is impossible

to divide the subject into an age of wood and another of iron.

The classification adopted by the Hindus differs considerably in different works. The most common arrangement is a twofold one, including under one head all missiles *(astra)* and under another, all non-missiles *(sastra)*. The former is then subdivided into four orders, *viz:—1st*, missiles cast by machines, *Yantramukta ; 2nd*, ditto hurled with the hand, *Páṇimukta ; 3rd*, ditto hurled by force of spells, *mantramukta ;* and *4th*, arms that can be hurled and then retracted, *muktasandhárita*. The second class included two orders. In Wilson's Essay "On the Art of War as known to the Hindus,"* the classes and orders are reckoned together. This is based closely on the Agni Puráṇa which gives a fivefold division, thus: 1, missiles cast by machines, such as bows; 2, cast by the hand, such as javelins; 3, retractive missiles, such as the lasso and the bomerang; 4, non-missiles, such as spears, &c. ; 5, natural weapons, as the fist.† Omitting the last, which is purely theoretical, the practical division is fourfold, and I shall adopt it as the most convenient tentative plan.

Bow.

Of the first class the oldest, the most important, and the most generally adopted national weapon of the Hindus from prehistoric times to the end of the middle ages, was the bow, and heroism in this country was invariably associated with superior proficiency in the use of that arm. No one rose to distinction as a

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* Works, Vol. IV. p.p. 299. f.

† यन्त्रमुक्तं पाणिमुक्तं मुक्तसन्धारितं तथा।
अमुक्तं बाहुयुद्धञ्च पञ्चधा तत् प्रकीर्त्तितं ॥ २ ॥
क्षेपणीचापयन्त्राद्यं यन्त्रमुक्तं प्रकीर्त्तितं।
शिलातोमरयन्त्राद्यं पाणिमुक्तं प्रकीर्त्तितं ॥ ४ ॥
मुक्तसन्धारितं ज्ञेयं पासाद्यमपि यद्भवेत्।
खड्गादिकममुक्तञ्च नियुद्धं विगतायुधं ॥ ५ ॥

warrior, who did not wield a heavy bow, and *Dhanurdhara* or "the master of the bow," was the highest term of compli ment that could be addressed to him. By a figure of speech the same term is even to this day applied also to men wh have achieved success in other walks of life. The Agn Purána praises its use by the remark that, "of all battles that in which bows are used is the best of all; that in whicl men fight with barbed instruments is tolerable. Fightin with swords is low and mean, and without arms, with bar hands, the meanest."* "Hence, perhaps," says Professo Wilson, "one of the elements of Indian inferiority in th field, as the arrow, however formidable as a missile, was bu a feeble instrument in close combat, and its use was calculate to impair the courage of the combatant, by habituating him to shun rather than to seek the contiguity of the foeman."† So great was the importance attached to the bow in ancient times, that the code of rules regarding archery was ennobled as a subsidiary Veda, *Dhanur Veda* These rules are no longer available; but enough remains in Sanskrit literature to show the estimation in which the arm in question was held. Certain it is that it led to the word *Dhanus* being used as synonymous with arms in general. So also the words *Dhanuska* and *Dhanvin*, signifying literally a bowman, were always used to denote a warrior or soldier.

In the Ṛig Veda, the employment of the bow in war is frequently mentioned, and the manner in which it is extolled may be perceived from the following prayer of Payu from the fifth Ashṭaka: "May we conquer the cattle (of the enemies) with the bow: with the bow may we be victorious in battle: may we overcome our fierce exulting (enemies) with the bow: may the bow disappoint the hope of the foe: may

* धनुःश्रेष्ठानि युद्धानि प्रासमध्यानि तानि च ॥ ६ ॥
तानि खड्गजघन्यानि बाहुप्रत्यवराणि च ।

† Works, IV., p. 291.

we subdue with the bow all (hostile) countries. This bowstring, drawn tight upon the bow, and making way in battle, repeatedly approaches the ear (of the warrior), as if embracing its friend (the arrow) and proposing to say something agreeable, as a woman whispers (to her husband). May the two extremities of the bow, acting consentaneously, like a wife sympathising (with her husband) uphold (the warrior), as a mother nurses her child upon her lap; and may they, moving concurrently, and harassing the foe, scatter his enemies."* The Rámáyaṇa and the Mahábhárata extol it even more highly, and the story of the great bow of S'íva, which Ráma snapped asunder and won a beautiful bride, shows that large heavy bows were held in estimation. Proficiency in archery was also greatly prized, and the Páṇḍava brothers obtained a princess as the reward of successfully shooting at a mark while looking at its shadow in water.

Materials of Bows.

Of the material of which the bow was made, little is said in ancient works, except that horn was sometimes used for the purpose. But the Agni Puráṇa, which in its chapters on archery and arms, and on regal administration, is, according to Wilson, distinguished by an entirely Hindu character, and must have been written long anterior to the Muhammadan invasion,† supplies the deficiency. In its chapter on arms it gives the following: "Bows, O best of the twice-born, are formed of three things, to wit, metal, horn, and wood; and the string of the bow is likewise made of three substances, *viz., saṇa* fibre *(Crotalarea juncea)*, hemp *(Bhangá, Cannabis sativa)*, and skin or hide. The most appropriate length for a bow is four cubits, three and a half cubits being middling, and three cubits inferior; it is to be so prepared that there may exist no unevenness from its centre to the extremities; the middle part

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* Wilson's Rig Veda, IV. p. 23.

† Wilson's Vishṇu Puráṇa Hall's ed Preface, p. xlxi.

should be joined with a spare piece of wood, so that it may be firmly held. The ends of the bow are to be made thin and tapering, so as to resemble the eye-brows of a handsome woman. Metal and horn bows should be made either of pure iron, or of iron and horn separately, or of those two substances conjointly. The horny bow is to be formed of a good shape and decorated with gold. Bows which are crooked, or have cracks or holes in them, are not good. The metallic bow is to be made of gold, silver, copper and black iron. Horny bows made of the horns of the buffaloe, the Sarabha, and the Rohisa are good. Bows are also made of sandal wood, rattan, the sál wood, the Dhavana, (a kind of *Hedysarum)*, and the Kakubha *(Pentapterá arjuna)*. But the bow made of bamboos which grow in the Sarat or clear season of autumn, and which are cut and taken at that time, is the best of all. Bows and scimitars are to be worshipped by repeating mantras capable of fascinating the three regions Svarga, Martya, and Pátála."

The most remarkable fact in the above extract is that the elastic bamboo is most extolled. The black iron was probably steel, and the other metals were used as ornaments; they are too inelastic to form a bow themselves. The horny bow was greatly esteemed, and Vishnu claims it as especially his own. Homer refers to the horny bow in the 110th verse of the 4th book of the Iliad, and Arnold thus explains it: καὶ τα μὲν—τέκτων. The horn-worker wrought (ἀσκήσας) the horns, and fitted (ἤραρε, ἄρω, *aptο*, D. 84.) the two lower ends of them to each other, so that they now made one bow."*

The size approved, four cubits, is nearly the same as that of the Egyptian bow, which, according to Wilkinson, measured from five feet to five feet and a half in length;† and among the materials for bow-strings we have mention of

* Arnold's Homer's Iliad, p. 112.

† Wilkinson's Ancient Egyptians, I., p. 304.

commentator in one place supposes that the points of such arrows were poisoned,* and in another place the Veda itself describes the arrow as made of the *sara* reed with its blade of iron and point anointed with poison.† The deer-horn point was undoubtedly the most ancient form, and must have prevailed for some time; but, seeing that the arms and armour of Greece in the time of Homer (B. C. 1,000) were for the most part of bronze, though iron was known and is often spoken of under the name "of difficult to work in," it may be fairly asked,—did the Aryans, to any large extent, employ iron for the fabrication of their arms during the early Vedic period of the Ṛik Sañhitá, notwithstanding occasional mention in it of the iron-pointed arrow? To meet this question, it is necessary to enquire to what extent that metal was known and worked.

Knowledge of iron.

The quotations given from the Ṛig Veda *(ante. p. 26)* about iron-walled cities, clearly show that the hardness of iron was well-known; but the epithet being in those cases metaphorically used, they do not suffice to prove that the metal was worked into shape. In the passages in which Indra is described as hurling his iron bolt upon the quick-moving Asuras,‡ or where his horse is described as having feet of iron, the same exception may be easily taken, though the last description may be accepted as an indication of the practice of shoeing horses. But swords (II. 156), spears (IV. 25), javelins (II. 292), lances (I. 774), (IV. ii. 288), and hatchets (I. 120), are frequently mentioned; and these weapons are "bright as gold," or golden (IV. 19), "shining bright" (I. 175), "blazing" (IV. 93), "sharp" (IV. 113), and "made of iron" (I. 226); they are "whetted on a grind-stone" (II. 36), to improve

* "You (As'vins) carried off Jáhushi to the top of the mountain in your triumphant chariot, and slew the son of Vis'vâinch with a poisoned (arrow)" Wilson's Ṛig Veda, I., 317. † Wilson's Ṛig Veda, IV., 27.

‡ Wilson's Ṛig Veda, I., 328, III, 23

their keenness (I. 150), and "polished to enhance their brightness" (II. 326). There are also allusions to razors, which would be utterly worthless unless made of iron, and it may be very fairly presumed that those who could and did forge razors of iron, could not forget the value of that metal as a material for pointed or edged weapons. It may be added that, according to Shaw, "the hardest tools in ancient Egypt, such as drills for working the granite obelisks, were made of Indian iron." Pliny says: "Ex omnibus generibus palma Serico ferro est. Seres hoc cum vestibus suis pellibusque mittunt. Secunda Parthico, neque alia genera ferri ex mera acie temperantur, cæteris enim admiscetur." (Lib. XXXIX. C. 14.) According to al Edrissi, "in montibus Kabel inveniuntur ferri fodinæ, celeberrimæ, et humanis usibus aptissimæ, producunt enim ferrum acutum et venustum." According to Nearchus, King Porus gave 30lbs. of steel to Alexander as the most precious present he could offer; and to "give an Indian answer," meaning "a cut with an Indian sword," is a common Arabic proverb in Arabshah, (apud Vincent's Periplus p. 364). It would be inconsistent to suppose that the race which produced such iron and swords did not know how to use, or, knowing, did not use them.

Shape, size and material of arrows.

Of the shape of the Indian arrow-heads, the Vedas afford no information, but the Rámáyaṇa and the Mahábhárata fully supply the deficiency. According to those authorities most of them were barbed; some were spear-shaped, others crescent-shaped, with the cutting edge either concave or convex: some needle-pointed, dentiform, or serrated; others square with two, three or more points. In sculptures, some of these forms are distinctly visible. Of the size and make of arrows, the Agni Puráṇa gives the following description: "Arrows should be made of bamboos or *sára* reed, (*Sac-*

*charum sara),* which must be free from spots, &c. They should-be straight, golden coloured, and have feathers of birds attached to their lower extremities." The Homeric arrows were likewise feathered, πτερόεντα, " and the feathers of large brids of prey were esteemed the best." The length of the arrow *(is'u)* varied greatly; but the most approved was three cubits on over four feet. "Besides the arrows commonly used, the Dhanurveda describes another kind, the Náràcha entirely of iron. Curtius, perhaps, alludes to this Náràcha when he says, "some of the archers shot with arrows which were too heavy to be very manageable."*

Quiver.

Ordinarily the quiver was probably made of hide or basket-work; but sometimes metal plates were also used in its fabrication. The Ṛig Veda often names quivers of gold, but it is not certain whether they were actually made of that metal, or were so called only by a poetical license. They were slung on the back (Woodcut No 31), sometimes two behind the two shoulders, tied in front by a cross belt. At Bhuvanes'vara quivers are pretty common, but being placed behind figures in bas-relief, their size, form, and make cannot be fully ascertained.

Drawing of bows.

The manner of drawing the bow up to the ear, as in modern Europe, while standing with the body turned sideways, is pointed out in the extract from the Ṛig Veda given above; and is confirmed by several passages in the Rámáyaṇa, the Mahábhárata and other ancient works in which the merit of aiming with the arrow drawn in a line with the eye to the ear *(ákarnasandhána)* is highly extolled. In the Sánchí sculptures, the same style is distinctly visible, and that this was the most perfect mode of using the bow, is evident from its adoption by some of the most civilized nations of

* Wilson's Works, IV., 299. † Wilkinson's Ancient Egyptians, I., 308.

antiquity, such as the Egyptians. The ancient Greeks, however, thought and acted differently. According to Homer, the bow should be held right in front, and the string drawn to the body, νευρὴν μὲν μαζῷ πέλασεν. (D. 123,) and hence it is that "the Amazonian women are reported to have cut off their right breast, lest it should be an impediment to its use."† In later times the Greeks adopted the Egyptian style, but never acquired much proficiency in it. Homer condemns it by the remark :—

> ὀξέσι δὴ πελέκεσσι καὶ ἀξίνῃσι μάχοντο,
> καὶ ξίφεσιν μεγάλοισι καὶ ἔγχεσιν ἀμφιγύοισιν, (Il. o.711-12.)

Layard's plates show that the ancient Assyrians also followed the Greek custom, and drew their bow-strings towards the breast, and not towards the right ear, though for the purpose of a good aim the latter would be the most convenient place. In the Iliad the epithet κυκλοτερὲς ἔτεινεν indicates that the bow was so drawn as to reduce it to a circular shape, but nothing of the kind is mentioned in the Hindu Sástra. The λίγξε—ἴαχεν or click and twang of the Homeric bow-string have their counterparts in the *dhanusṭankára* of the Hindus.

Gauntlet.

To protect the left forearm from the abrasion of the bow-string, it was in Vedic times, wrapped in folds of leather,* but the sculptures do not anywhere show a trace of this gauntlet. The Egyptians used a slip of leather for the same purpose, but instead of folding it round the forearm, wore it only on the inner side, tied at the wrist and the elbow.† In later times, the Indians used metal gauntlets, but I have seen no sculpture of them of an early date.

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* "The ward of the forearm, protecting it from the abrasion of the bow-string, surrounds the arm like a snake with its convolutions." Wilson's Rig Veda, IV., 26. † Wilkinson's Ancient Egyptians, I., 306.

Of the different attitudes which were assumed in using the bow, the Agni Purána gives the following description : "The *Sampada* attitude in shooting, is the standing with the feet even, the two great toes, ankles, and heels being closely opposite each other ; and the position of standing with the feet three spans apart. Laying the centre of gravity on the toes, and keeping the knees unbent, is the *vais'ákha* posture. The attitude in which both the knees appear like a flock of geese, and in which the archer stands with the feet four spans asunder, is called *Maṇḍala ;* and the *Álídha* posture is said to be that, in which the right thigh and knee are kept unbent, and in which the feet are placed five spans apart, assuming the shape of a plough. The contrary of the above is called the *Pratyálídha* attitude. The *Játa* attitude is that in which the left leg should be kept in a crooked position, the left heel at a distance of five fingers from the ankle of the right foot, and the knees twelve fingers apart from each other. The *Daṇḍáyata* posture is of this description ; the left knee straight, and the right advanced or a little bent, and firmly fixed ; but when this attitude is such that the knees are two cubits distant from each other, it is called *Vikata.* The *Sampuṭa* attitude is said to be the bending the knee double, and keeping the feet raised from the ground (except the fore part), or standing with the legs straight as sticks, and the feet sixteen fingers apart from each other."*

Attitude in drawing the bow.

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* Wilson's MS. Translation, which is somewhat condensed. The following is the text :

अङ्गुष्ठगुल्फपाण्यंघ्रयः श्लिष्टाः स्युः सहिता यदि ।
दृष्टं समपदं स्थानमेतल्लक्षणतस्तथा ॥ ९ ॥
बाह्याङ्गुलिस्थितौ पादौ स्तब्धजानुबलावुभौ ।
त्रिवितस्त्यन्तरस्थानमेतद्वैशाखमुच्यते ॥ १० ॥
हंसपंक्त्याकृतिसमे दृश्येते यत्र जानुनी ।
चतुर्वितस्तिविच्छिन्ने तदेतन्मण्डलं स्मृतं ॥ ११ ॥

In the Rámáyaṇa mention is made of the bow as an instrument for casting pellets of stone; but its use was most probably limited to shooting birds, for it is nowhere named in connexion with warfare. The sling too was well-known, and Bharata, in the Rámáyaṇa, is described as highly proficient in its use. Wilkinson says: "The Acarnanians were proud of their skill in managing it, and were surpassed by the Achæans alone, of all the Greeks, who even vied with the natives of the Balearic Islands; and so expert were these last, and of such importance did they consider the sling, that the principal care of a parent was to instruct a boy in its use."* Homer admits the sling (σφενδόνη) as an instrument of war, and the "plaited wool," of which it was made, serves in one place as a bandage for tying a wound. The Hindus, however, never gave it any prominence, and deservedly treated it with contempt. Neither the pellet-bow nor the sling occurs in sculpture.

Pellet-bow and sling.

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हलाकृतिमयं यत्र स्तब्धजानूरुदक्षिणं ।
वितस्त्यः पञ्चविस्तारे तदालीढं प्रकीर्त्तितं ॥ १२ ॥
एतदेव विपर्य्यस्तं प्रत्यालीढमिति स्मृतं ।
तिर्य्यग्भूतो भवेद्वामो दक्षिणोऽपि भवेदृजुः ॥ १३ ॥
गुल्फौ पार्ष्णिग्रहौ चैव स्थितौ पञ्चाङ्गुलान्तरौ ।
स्थानं जातं भवेदेतद् द्वादशाङ्गुलमायतं ॥ १४ ॥
ऋजुजानुर्भवेद्वामो दक्षिणः सुप्रसारितः ।
अथवा दक्षिणज्जानु कुब्जं भवति निश्चलं ॥ १५ ॥
दण्डायतो भवेदेष चरणः सहजानुना ।
एवं विकटमुद्दिष्टं द्विहस्तान्तरमायतं ॥ १६ ॥
जानुनी द्विगुणे स्यातामुत्तानौ चरणावुभौ ।
अनेन विधियोगेन सम्पुटं परिकीर्त्तितं ॥ १७ ॥
किञ्चिद्विवर्त्तितौ पादौ समदण्डायतौ स्थिरौ ।
दृष्टमेव यथान्यायं षोडशाङ्गुलमायतं ॥ १८ ॥

* Ancient Egyptians, I., p. 317.

Fire-arms, Catapults, &c.

The destructive power of fire must have from the earliest period suggested the idea of fire, in some form or other, being used as an offensive agency, and instruments of some kind or other must have been designed for casting it among enemies. That such was at least the case with the ancient Hindus is evident. They cast boiling oil, explosive oils, melted rosin *(kalpala)* of the Sal tree and fire-tipped darts at their enemies, and they could not have done so safely to themselves without having at command mechanical means for the purpose. And from the frequent mention of the *Agni Astra* or "fire-arms," in ancient works, it is to be inferred that the Hindus had some instruments for hurling shells or balls of burning matter against their enemies. No sculptural representation of any such has, however, yet been met with. There are two scenes of sieges among the Sánchí bas-reliefs; but no traces in them of battering-rams,* or catapults of any kind for breaking down walls, or for hurling stones amidst the ranks of the enemy, or of engines for casting burning matter to a distance to set fire to besieged towns and fortresses, are visible. There are several martial processions and battle scenes at Bhuvanes'vara; but they too are devoid of any evidence on the subject. In the *Udyoga Parva* of the Mahábhárata, Yudhisthira is described as collecting large quantities of rosin, tow, and other inflammable articles for his great fratricidal war; but no details are given there of any engine with which they could be hurled against his enemies. The only instruments named, which could be assumed to have belonged to this class, are the *Nalika*, "the tubular weapon," through which fire darts were discharged, *Maháyantra* or "the great engine," and the *Sataghni* or "centicide," a mitrailleuse which could kill a hundred at a time; but what they were like, and how they worked, are not mentioned.

* The Nítiprakás'iká calls this instrument the *Parigha* and describes it as of "round shape as big as a palmyra tree, and of good wood; experts know that a whole troop is required to make it move and strike." Oppert's Weapons, p. 22.

143. "There may be six or even four parts of saltpetre in the gunpowder used for tubular arms, but the parts of sulphur and charcoal remain as before.

144. "The ball is made of iron, and has either small balls in its inside or is empty; for small tubular arms it should be of lead or of any other metal.

145. "The tubular projectile weapon is either of iron or of another metal, it is every day to be rubbed clean, and covered by gunners.

146. "With a similar, greater, or less proportion of charcoal, sulphur, and saltpetre, of realgar, of orpiment and likewise of graphite.

147. "Of vermillion, also of powder of magnetic iron oxide and of camphor, of lac, and of indigo and likewise of the pine gum *(Pinus longifolia.)*

148. "Experts make gunpowder in many ways, and of white and other colours.

149. "By the application of fire they throw the ball coming from the tube at the mark.

150. "One should clean the tube first and then put gunpowder, carry it down with the ramrod to the bottom of the tube till it is tight.

151. "Then put a good ball, and place gunpowder on the vent, and by setting fire to the powder at the vent discharge the ball towards its mark."*

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* अस्त्रम् तु द्विविधम् ज्ञेयम् नालिकम् मान्त्रिकम् तथा ।
यदा तु मान्त्रिकम् नास्ति नालिकम् तत्र धारयेत् ॥
सह शस्त्रेण नृपतिर्विजयार्थम् तु सर्वदा ।
लघुदीर्घाकारधारभेदैः शस्त्रास्त्रनामकम् ॥
प्रथयन्ति नवम् भिन्नं व्यवहाराय तद्विधः ।
नालिकं द्विविधं ज्ञेयं बृहत् क्षुद्रविभेदतः ॥
तिर्य्यगूर्द्ध्वच्छिद्रमूलं नालं पञ्चवितस्तिकम् ।

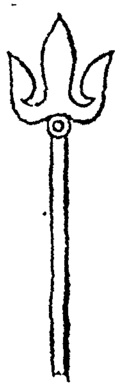
Oppert's Weapons, &c., p.p. 105 f.

It is difficult to read the above without a feeling of suspicion about its authenticity. The flint-lock of the last three centuries comes so vividly to mind, that it is difficult

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मूलाग्रयोर्लक्ष्यभेदितिलबिन्दुयुतं सदा ॥
यन्त्राघाताग्निकृत् ग्रावचूर्णधृक् कर्णमूलकम् ।
सुकाष्ठोपाङ्गबुध्नं च मध्याङ्गुलबिलान्तरम् ॥
स्वान्तेऽग्निचूर्णसन्धातृशलाकासंयुतं दृढम् ।
लघुनालिकमप्येतत् प्रधार्यं पत्तिसादिभिः ॥
यथा यथैतत् त्वक्सारं यथा स्थूलबिलान्तरम् ।
यथा दीर्घबृहद्गोलं दूरभेदी तथा तथा ॥
मूलकीलभ्रमात् लक्ष्यसमसन्धानभाजि यत् ।
बृहन्नालीकसंज्ञं तत् काष्ठबुध्नविवर्जितम् ॥
प्रवाह्यं शकटाद्यैस्तु सुयुक्तं विजयप्रदम् ।
सुवर्चिलवणात् पञ्च पलानि गन्धकात् पलम् ।
अन्तर्धूमविपक्वार्कस्नुह्याद्यङ्गारतः पलम् ।
शुद्धात् संग्राह्य संचूर्ण्य सम्मील्य प्रपुटेत् रसैः ॥
स्नुह्यर्काणां रसोनस्य शोषयेत् आतपेन च ।
पिष्ट्वा शर्करवत् चैतत् अग्निचूर्णं भवेत् खलु ॥
सुवर्चिलवणात् भागाः षट् वा चत्वार एव वा ।
नालास्त्रार्थाग्निचूर्णे तु गन्धाङ्गारौ तु पूर्ववत् ॥
गोलो लोहमयो गर्भगुटिका केवलोऽपि वा ।
सीसस्य लघुनालार्थे ह्यन्यधातुभवोऽपि वा ॥
लोहसारमयं वापि नालास्त्रं त्वन्यधातुजम् ।
नित्यसम्मार्जनस्वच्छं अस्त्रपातिभिरावृतम् ।
अङ्गारस्यैव गन्धस्य सुवर्चिलवणस्य च ।
शिलाया हरितालस्य तथा सीसमलस्य च ।
हिङ्गुलस्य तथा कान्तरजसः कर्पूरस्य च ॥
जतोर्नील्याश्च सरलनिर्यासस्य तथैव च ।
समन्यूनाधिकैरंशैरग्निचूर्णान्यनेकशः ॥
कल्पयन्ति च वेत्तारः चन्द्रिकाभादिमन्ति च ।
क्षिपन्ति चाग्निसंयोगात् गोलं लक्ष्ये सुनालगम् ॥
नालास्त्रं शोधयेत् आदौ दद्यात् तत्राग्निचूर्णकम्
निवेशयेत् तत् दण्डेन नालमूले यथा दृढम् ॥
ततः सुगोलकं दद्यात् ततः कर्णेऽग्निचूर्णकम् ।
कर्णचूर्णाग्निदानेन गोलं लक्ष्ये निपातयेत् ॥

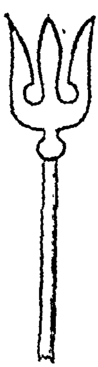
round on the right, they should turn it over their heads, and afterwards throw it on the throat of a human figure, made of wicker-work, or reeds. They then should do the same to a real man, after covering his body with skin. After this, they should try to throw the string on the neck of a horse at full gallop, or of animals jumping about, or such as are moving fast. This practice should be repeated many times, in order to be accustomed and well-skilled in it. In this manner, being masters of their hands, they will begin to bind (their enemy) with the *Pása*."



No. 134.

This lasso is sometimes exhibited in sculpture. On the Ráni Naur frieze at Udayagiri, there are two or three nooses seen on the body of a crouching elephant in a cave, and one also in the hand of one of its assailants ready to throw it on the animal.

The Bumarang (scatterer,) *ástara* is thus described in the *Níti-prakás'iká*, "it has a knot at the foot, a long head, and is a hand broad. Its middle part is bent to the extent of a cubit, it is sharp, black-colored and two cubits long. Whirling, pulling, and breaking are its three actions, and it is a good weapon for charioteers and foot-soldiers."



No. 135.

Commenting on this Dr. Oppert says, "the general belief is that the bumarang is a weapon peculiar to the Australians; but this is by no means the case. It is well-known in many parts of India, especially in its Southern Peninsula. The Tamulian, Maravar and Kallar employ it when hunting, and throw it after deer. In the Madras Government Museum are shown three bumarangs, two ivory ones, which came from the armoury of the late Rájá of Tanjore, and a common wooden one, which hails from Pudukota. The wood of which the bumarang is made is very dark. I possess four black wooden and one iron bumarang, which I have received from Pudukota. In the arsenal of the

Pudukota Rájá is always kept a stock of these sticks. Their name in Tamil is *valai tadi* "bent stick," as the stick is bent and flat. When thrown a whirling motion is imparted to the weapon which causes it to return to the place from which is was thrown. The natives are well acquainted with this peculiar fact. The length of the ästara or bumarang is not always exactly the same, the difference amounts often to more than one cubit."*



No. 136.

Clubs.

Of arms of the non-missile class sticks, clubs, and maces were the most ancient. Though they could be hurled at an enemy when hard pressed, they were ordinarily not intended for such a purpose. Various kinds of clubs are shewn on the Great Tower of Bhuvanes'vara, but they call for no remark. Woodcut No. 137 shows a fancy top. Woodcut No. 138 shows a large mace or club, five feet high, tied with ornamental metal bands. Its body is ribbed, and the ends are mounted with thick knobs It has been taken from the hand of a guard at the entrance to the Bhoga Maṇḍapa at Puri.



No. 137.

Battle-axe.

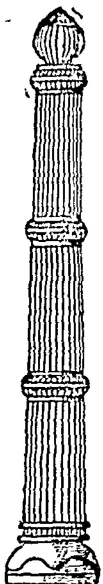
The battle-axe was in India, as much as in ancient Europe, a dreadful weapon of destruction, and various forms of it may be seen at Sánchí, Amarávati and Bhuvanes'vara. Woodcuts Nos. 139, 140, 141 and 142, represent some of the commonest kinds, and a very elaborate one is shewn in woodcut No. 143, taken from the hand of a statue of Ganes'a in the Great Tower.

Swords.

The most important weapon of this class, however, is the sword. Its oldest forms are shewn in woodcuts, Nos. 144, and 145, taken

* Oppert's "Weapons," &c., pp 18 f.

from two copper weapons in the Indian Museum. Their history is not known, but apparently they are the oldest Indian metal arms that have been preserved to our time. Both of them are double-edged, and ribbed in the middle, to lighten the weight and at the same time to give them sufficient strength: neither has a guard or quillon above the hilt: but the second has two quillons in the place of the pummel, and the first only one. The swords are thick and heavy, and must have been very inconvenient to use. The edges of both are in places jagged from having been repeatedly struck upon some hard substance. It is impossible to say if the old Vedic swords were of this shape; but both at Sánchí and Bhuvanes'vara forms very like it, but with somewhat better handles, are not uncommon. (Woodcut No. 146). At the latter place, the ordinary Indian sabre, the *asi* of Sanskrit writers, whence probably the *acinaces* of the Romans, is common; it was generally worn on the left side, and, not as among Greeks and Romans, on the right side. Its blade is short and curved, but not quite so much as that of the scimitar. It is single-edged, except near the point, where it is sharp on both sides. Its handle is provided with quillons and pummel, rarely also with a guard. At Sánchí there is a straight broad sword in a scabbard, very like a Scotch claymore; and straight swords like the navy cutlass are also met with at Bhuvanes'vara. (Woodcuts Nos. 147 and 148). But the most important instrument of the sword class at the latter place is the *khándá*, a heavy, broad, single-edged sword with a turned-up point, something like a Chinese sabre-knife. It was the favourite weapon of the goddess Durgá in her different

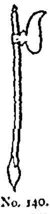


No. 138.



No. 139.

manifestations. In the present day it is used for sacrificial purposes, being too heavy for warfare. It is always carried in the hand, never slung from the waist. A modification of it, called *dhúp*, was for some time the ordinary offensive arm of the Bengal paik. The Mahráttas called their long, straight broadsword by the name of *khándá*, and in Duff's History of the Mahráttas there is a drawing of the famous *Khándárájá*, or "king of Khándás," of the great patriot S'ivají; and its counterpart has been seen in Orissan sculptures. In the temple of Gaurí at Bhuvanes'vara there is a double-bladed straight sword; but it was probably a fancy weapon, not of much actual use (Woodcut No. 149)



No. 140.

The following extract from the Brihat Sañhitá of Varáha Mihira, (chap. 4) affords many curious traits of the superstitions which formerly prevailed, and to a certain extent still prevail in India in regard to swords and their uses :—

1. "A sword of the longest description measures fifty digits; the shortest is of twenty-five digits. A flaw on such a spot (of the sword) as corresponds with an odd number of digits, must be deemed ill-ominous.

2. Yet flaws resembling a Bilva fruit, Vardhamána figure, umbrella, emblem of S'iva, earring, lotus, banner, weapon, or cross, are held auspicious.

3. Flaws shaped like a lizard, crow, heron, carrion bird, headless trunk, or scorpion, and several flaws along the upper edge, are not lucky.

4. A sword that shows a chink, is too short, blunt, damaged at the upper edge, unpleasing to eye and mind, and without tone, is inauspicious. The reverse qualities forebode favourable results.

5. The rattling of a sword (of itself) is said to portend death; its not going out of the sheath (when drawn) augurs defeat. There will be strife when the sword *jumps out of the scabbard* by itself, but victory when it is seen flaming.

6. The king ought not to unsheath it without reason, nor rub it, nor look at his own face in it, nor tell its price. He should not mention the place whence it has come from, nor take its measure, nor, without precaution, touch the blade.

7. The most esteemed swords are those that are fashioned like a cow's tongue, a lotus-petal, a bamboo leaf, and an oleander leaf, rapiers and scimitars.

8. If a wrought sword proves too long, it may not be shortened by striking off a portion of it, but should be polished till it has the length required. The owner dies, if a piece is struck off at the upper end; and his mother dies, if the same is done at the point.

9. From a flaw on the hilt you may infer the existence of a corresponding flaw on the blade, just as you may conclude on seeing a mole in the face of a damsel, that there is another such in her hidden parts.

10. And by observing which part of the body is touched by a swordsman, when consulting the diviner, the latter will be able to indicate the place of the flaw on the sword in the scabbard, provided he (the diviner) knows the following rules.

11—15. If the man touches his head, the flaw is at the first digit; the second digit corresponds with the forehead; the third with the spot between the brows; the fourth with the eyes; the fifth with the nose; the sixth with the lips; the seventh with the cheeks; the eighth with the jaws; the ninth with the ears; the tenth with the neck; the eleventh with the shoulders; the twelfth with the breast; the hirteenth with the armpits; the fourteenth with the paps; the fifteenth with the heart; the sixteenth with the belly; the seventeenth with the loins; the eighteenth with the navel; the ninteenth with the abdomen; the twentieth with the hip; the twenty-first with the pudendum; the twenty-second with the thighs; the twenty-fourth with the knees; the twenty-fifth with the legs; the twenty-sixth with the part between the legs; the twenty-seventh with the ankles; the twenty-eighth with the heels; the twenty-ninth with the feet; the thirtieth with the toes: such is the theory of Garga.

16—19. The consequences to be foretold from a flaw in the first, second, third digit, and so forth, up to the thirtieth digit, are as follows: death of a child, obtaining of wealth, loss of riches, good fortune, captivity, birth of a son, quarrels, acquiring of elephants, death of a child, acquiring of wealth, destruction, getting a wife, grief, gain, loss; getting a wife, death, prosperity, death, contentment, loss of wealth, acquiring of riches, death without salvation, obtaining of wealth, death, good fortune, poverty, dominion, death, kingly power.

20. Upwards of the thirtieth digit no consequences are specified; in general, however, the flaws at the odd digits are injurious, at the even ones auspicious. But according to some authorities, the flaws from the thirtieth digit upwards to the sword's point are of no consequence at all.

21. A sword that smells like oleander, blue lotus, elephant's frontal juice, ghee, saffron, jessamine, or Michelea champaka, brings good luck; but ill-omened is one that has the odour of cow-urine, mud, or fat.

22. A smell similar to that of tortoise blubber, blood, or potash, augurs danger and pain. A sword glittering like beryl, gold, and lightning, brings victory, health, and prosperity.

23. The fluid to imbrue a sword with, according to the precept of Us'anas

is: blood, if one wishes for a spendid fortune; ghee, if one is desirous to have a virtuous son; water, if one is longing for inexhaustable wealth.

24. An approved mixture to imbrue the sword with, in case of one desirous to attain his object by wicked means, is: milk from a mare, a camel, and an elephant. A mixture of fish bile, deer-milk, horse-milk, and goat-milk, blended with toddy, will make the sword fit to cut an elephant's trunk.

25. A sword, first rubbed with oil, and then imbrued with an unguent compounded of the milky juice of the Calotropis, goat's horn, ink, dung from doves and mice, and afterwards whetted, is fit for piercing stones.

26. An iron instrument imbrued with a stale mixture of potash of plantains with butter-milk, and properly whetted, will not get worked on a stone, nor blunted on other iron instruments."*

Two thousand years ago the sheath was generally made of wood, covered, as in the present day, with pink cloth of some value. Thus in the Toy-cart:



"*Servant.* This is your honor's sword.

*Samsthánaka.* Ah, very well, give it me *(takes it by the wrong end.)* I bear it on my shoulder, sleeping in its pink sheath."†

A belt was usually tied round the waist to suspend the swords, and a sword-knot was not unfrequently put on. Both these were known by the common name of *mekhalá*, which in the case of women, was very appropriately employed to indicate the zone or girdle. The sword-knot was sometimes formed of a metallic chain fastened to the hilt, and in fighting bound round the wrist to secure the weapon—a procedure which must have proved very troublesome whenever the blade snapped in the midst of a fray.

No. 141.



No. 142.

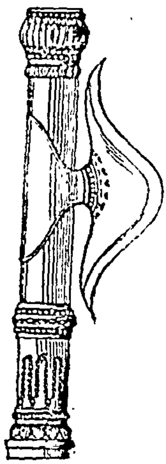
Daggers, &c.

Of the short sword or dagger, *(Mushṭika,)* the true warknife and its varieties, the poniard, the stiletto, and the kuttar, the sculptures of Orissa and Sánchí, afford

* Kern's Translation, Journal Rl. As. Soc., N.S., VI., pp. 81, et seq.

† Lit. of the colour of the flesh of barkless raddish. Wilson's Hindu Theatre, I., p. 37.

a great number of examples. Woodcut No 150, from the Great Tower, is very like a Nepalese knife. No. 151 is a broad, blunt-ended knife with a carved deer-head handle; and No. 152, is a knife of the same description, but with a lancet-headed point, taken from a male figure found under a banian tree near the Márkaṇḍa Tank at Puri. Woodcut No. 153, is from the temple of Gaurí. It is a triangular-bladed dagger or cut and thrust knife, which used to be held by the cross bar at the bottom. It belongs to the same class with the kuttar of the present day. Woodcut No. 154, is also peculiar; it is from Bhuvanes'vara. In Orissa this weapon seems to have been a great favourite, and on the Great Tower several nude statues in amatory positions are made to carry it in their waist bands. The *sphyu* or sacrificial knife of the Vedic times was a dagger; but it was made entirely of wood.



No. 143.

Besides these there are a great number named, but their descriptions are not forthcoming. See Oppert's "Weapons."



No. 144.

Defensive arms, shields.

Of defensive arms the first object which demands notice is the shield. In ancient India it was made of hide; hence its name *charma*, or leather *par excellence*. But hard wood was subsequently used for the purpose; and accordingly the *Yuktikalpataru* defines the *charma* as "an arm which covers or protects the body. It is of two kinds, according as it is made of wood or hide. It should protect the body, and be firm, light and tough. That which is insufficient to cover the body, or is heavy, soft, easily penetrable, or made of an offensive material, is defective."* With the

* शरीरवारकं शस्त्रं चर्म्म इत्यभिधीयते ।
तत्पुनर्द्विविधं काष्ठचर्म्मसम्भवभेदतः ॥

Egyptians and the Grecians the material was commonly bull's hide with the hairy side outwards,* and Homer gives sevenfolds of it to the shield of Ajax, and nine to that of Achilles; but the Hindus preferred the hide of the buffaloe and of the rhinoceros, and their superior toughness rendered folding unnecessary. At a subsequent period metal seems to have been likewise used in the fabrication of shields, and specimens have been met with both in iron and copper. Two of the latter metal are preserved in the Indian Museum, but their ages are unknown.



No. 145.

The shape of the instrument was ordinarily circular, as in the woodcut No. 155, from the temple of Bhuvanes'vara; but it was not invariably so. Woodcut No. 156 shows an oval shield; and oblong shields made of boards, or wicker-work covered with leather, with sometimes an iron rim, very like the *scutum* of the Romans, were not unknown; and small bucklers of an oblong or irregular shape were common. The former occur repeatedly at Bhuvanes'vara, (woodcut No. 157, taken from a figure in the Indian Museum,) and the latter at Sánchí. (Woodcuts Nos. 158 and 159, taken from General Cunningham's 'Bhilsá Topes.') At Khaṇḍagiri there is a shield, the top and sides of which are rectilinear, and the lower part pointed. Judging from the extent of the body it covers, it was probably two and a half feet long, and had a prominent ridge in the middle. At Sánchí, two instruments have been noticed of a similar



No. 146.

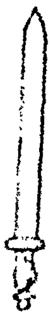
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शरीरावरकत्वञ्च लघुता दृढता तथा।
दुर्भेद्यतेति कथितश्चर्म्मणां गुणसंग्रहः॥
खलता गुरुता चैव मृदुता सुखभेद्यता।
विरुद्धरक्तता चेति चर्म्मणां दोषसंग्रहः॥

MS. No. 415, in Mohárájá Jotindramohun Tagore's Library, f. 56a.

* Wilkinson's Ancient Egyptians, I., p. 299.

shape, but with the upper edge rounded, the ground of the one being plain, and that of the other bearing a diagonal cross. (Woodcuts Nos. 160 and 161 taken from Fergusson's "Tree and Serpent Worship.") These were, however, never made so big as to entirely cover the soldier, as was the European pavise. Two specimens of this shield, made of wood and shaped very much like canoes with wooden handles,* exist in the Museum of the Asiatic Society of Bengal. (Woodcut No. 162.) At Bhuvanes'vara some of the circular shields are padded inside, and held by two straps tied to four rings.

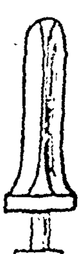


No. 147.

The ornaments on these shields were limited to a few metal bosses or stars, probably of brass, and rarely a tassel. But at *Koṇárak*, *a specimen has been seen* which is most elaborately ornamented. (Woodcut No. 163.) *It is nearly two and a half feet in* diameter, bound round the edge with a metal rim, and decorated with an outer band formed of circular plates of metal bearing impressions in relief of men, horses, elephants, deer, fishes, birds, tortoises, lizards, and floral scrolls, and having a scalloped inner edge. A medallion of a chaste design covers the centre, and to it is attached a thick bushy yak-tail chauri; a second chauri of the same kind, but with a differently formed handle, hangs from the top. For distinctive badges it has two well-formed lizards. At first sight, this buckler appears to be a sort of a pageant shield intended more for display on festive occasions than for use; but it was found in the hand of a warrior crouching under a prancing horse, whose rider had dismounted and was ready with a drawn sword to give him the *coup de grace*. The use of lizards as dis-



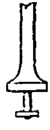
No. 148.



No. 149.

* Some of the bucklers used during the Trojan war had wooden handles.

tinctive badges appears to have been brought down to a very recent date. They occur in shields even of the last century; and Mr. Egerton, in his 'Illustrated Hand-book of Indian Arms,' (p. 48) thus adverts to it: "The large shields of Damascened steel offer rich field for ornament in gold work, the best of them are made at Delhi and Lahore. In one, in the E. Collection inside the rich arabesque border, tigers and dragons alternate with a small palm or Soma tree. In the centre, where there are usually the bosses which hold fast the handles, there are four lizards or crocodiles in high relief curled up, and in the centre of all the scene with a human face depicted on it."



Dhupa.



Double bladed sword.

Speaking of Indian archers, Arrian says: "in their left hand they carry bucklers made of undressed ox-hide, which are not so broad as those who carry them, but are about as long. Some are equipped with javelins instead of bows, but all wear a sword, which is broad in the blade, but not larger than three cubits; and this when they engage in close fight (which they do with reluctance), they wield with both hands, to fetch down a lustier blow. The horsemen are equipped with two lances like the lances called *saunia*, and with a shorter buckler than that carried by the foot soldiers." (McCrindle's Translation, p. 221).



No. 150.

Armour for the head.

Defensive armour for the head has nowhere been noticed in Orissa. The heads of warriors are either left with their natural covering of hair, or bound round with turbans, or surmounted with high, ornamented caps. This is remarkable, considering that even in the early days of the Rig Veda helmets * were greatly prized; and in the Rámáyaṇa

* "The brilliant (Maruts) bearing the lightning in their hands, radiant above all, gloriously display their golden helmets on their heads." Wilson's Rig Veda, V., p 251.

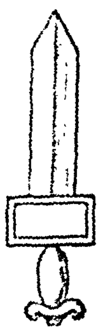
and Mahábhárata much praise is bestowed on those who succeeded in cleaving the helmets *(kiríṭa)* of their adversaries. During the middle ages, the Marhaṭṭas used very extensively iron casques with neck-guard, cheek-flaps, and moveable nose-pieces; and in the poems of Chand the helmet is frequently mentioned.



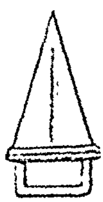
No. 152.

Armour for the trunk.

Armour for the body is, likewise, wanting at Bhuvanes'vara and Puri. But in Mr. Fergusson's 'Tree and Serpent Worship,' there is a figure from Amarávatí lithographed from a drawing in the Mackenzie collection, (plate LXVI,) which appears as if dressed in a coat of chain-mail; (woodcut, No. 34;) but without a careful examination of the original, its nature cannot be definitively settled. This is, however, scarcely necessary, for there is ample written evidence to prove that formerly metallic coats were in common use, as in Europe during the middle ages, by superior officers and distinguished warriors and chiefs. The Kshatríya or military caste early assumed the distinctive surname of *Varman* or the "mail-clad," and the Sanskrit language includes more than a dozen names for armour for the chest. In the Ṛig Veda the coat of mail *(kavacha)* is repeatedly mentioned. Thus, Agni is invoked "to blaze (fiercely), repelling repeatedly, like a coat of mail, the enemies of his worshippers in combats."* The Asvins are asked to be "like two dogs, warding off injury to the persons" of his adorers, "and, like two coats of mail, to defend them from decay."† "When the mailed warrior advances in front of battles, his form is like that of a cloud: with his body unwounded do thou conquer: may the strength of the armour defend thee."‡ Again, "I cover thy vital parts with



No. 152A.



No. 153.

* Wilson's Ṛig Veda, II., 66. † Ibid. II., 310. ‡ Ibid. IV., 23.

armour:"* "Slayer of enemies, thou Indra, art our armour."† In none of these and in several other such passages is the material of the armour indicated; but the Maruts are described in two or three places as having "golden breast-plates."‡ Elsewhere the attendants of Kasu, son of Chedi, are described as "wearing cuirasses of leather," § and in an old hymn in the First Book, Agni is said to defend "the man who gives presents (to the priests) on every side, like well-stitched armour," which Dr. Wilson supposed was a "*quilted jacket such as is still sometimes worn.*" ‖ This leather, or quilted coat was probably longer than the chain-mail, and reached the knees. Something like it is described in the following passage from the *Uttara-ráma-charita* in which Janaka expresses his first impression of Ráma:



No. 154.



No. 155.



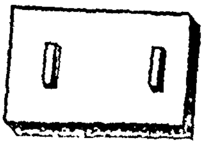
No. 156.

"You have rightly judged
His birth: for see, on either shoulder hangs
The martial quiver, and the feathery shafts
Blend with his curling locks: below his breast,
Slight tinctured with the sacrificial ashes,
The deer skin wraps his body: with the zone
Of *Múrva* bound, the madder-tinted garb
Descending vests his limbs; the sacred rosary
Begirts his wrist, and in one hand he bears
The *pipal* staff, the other grasps the bow."¶

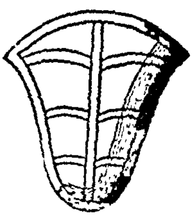
The picture, however, is ideal, and pourtrays what the poet thought had been the attire, some twenty centuries before

* Wilson's Rig Veda, IV., 27. † Ibid. IV., 80. ‡ Ibid. IV., 300.
§ Ibid. IV., 230 ‖ Ibid. I., 83 ¶ Hindu Theatre, I., 316.

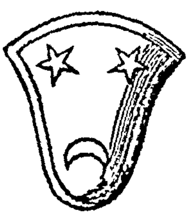
him, of a military student in his noviciate, long before he had earned his spurs. It cannot be accepted as a safe guide for any historical conclusion. The great *S'atarudriya* hymn of the *Vájasaneyi S'añhitá* of the Yajur Veda, which dates from a much earlier period, is, however, precise on the subject. It addresses Rudra as girt in "cotton-quilted cuirass," and "iron-mail" and "armour."* The Rámáyaṇa and the Mahábhárata are more positive on the subject, and state the Kavacha to be an iron armour, though they are silent as to whether the form was that of beaten plates sewed on cloth or leather, or of chain-mail. In the latter, some mail coats are described to be of iron plated over with gold; others white and lined with steel, and studded with a hundred eyes.† At a later age Arrian, adverting to the wound received by Porus on his right shoulder, says, "that place alone was bare during the action, for his coat-of-mail, being excellent both for strength and workmanship, as it afterwards appeared, easily secured the rest of his body."‡ Sanskrit lexicographers are, likewise, universally of opinion that the *kavacha* was made of iron; but they too afford no positive information as to its make. Judging from the prevalence of chain-mail among the Marhaṭṭás, I am disposed to think that a shirt of mail



No. 157.



No. 158.



No. 159.

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* "नमो बिल्मिने च कवचिने च नमो वर्म्मिणे च"

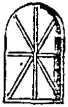
Muir's Sanskrit Texts, IV., p. 270.

† सुवर्णपृष्ठं सूर्याभं सूर्यदत्ताभ्यहारयत् ।
दृढमायसगर्भञ्च श्वेतं वर्म्म शताक्षिमत् ॥

Viráṭa Parva, Chap. 31.

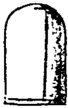
‡ Rooke's Translation II., p. 39.

formed of small iron or steel rings interwoven was preferred to solid breast-plates; but leather was not altogether rejected. The Marhattas used mail with inlaid plates; and coats of rhinoceros or buffaloe hide boiled in oil were also common.



No. 160

Allusion has already been made to the fore-arm guard noticed in the Vedas *(ante. p. 304)*. In the Mahábhárata it is also mentioned, as also a visor,* but there is no name in Sanskrit for shoulder, leg and thigh guards, or other article of defensive equipment. The Marhattás had a large steel gauntlet, but it has no ancient name; at least I know of none.



No. 161.

Flags, trumpets and war-cries.

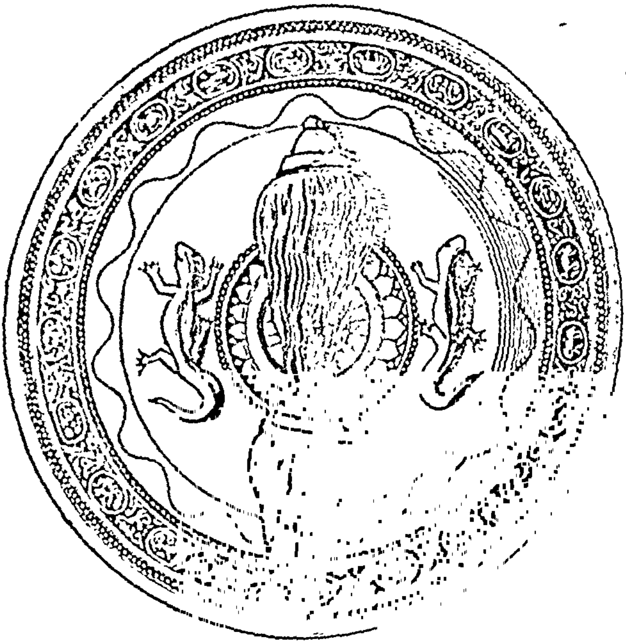
Immediately after arms and armour it would not be amiss to notice three objects, which, though perfectly harmless by themselves, exercise the most potent influence in warfare, *viz.*, the flag, the trumpet and the war-cry. As a rallying point for soldiers in action, or for the assemblage of troops, the flag is of the highest importance, and a feeling of chivalrous devotion to it has at all times been cherished as a point of military honor. "The idea of such a signal," says an able writer on the "Scope and Uses of Military Literature and History," "is universal, and the external cause of its adoption obvious. However little accustomed men may be to act in concert, it is always possible to unite them in one mass by the conspicuous display of a striking object in a central position. If the uplifting of this ensign be accompanied by the shout of a strong-voiced man, or the commanding tone of a loud instrument, the appeal to two organs of sensation, both the ear



No. 162.

* Dronáchárya, when wounded, is said to have raised his visor, and Arjuna took the opportunity to aim at his face, an arrow which proved fatal.

and the eye, must be followed by an increased degree of alertness on the part of the troops so summoned," (p. 159).



No. 163.

The Hindus, from a very early period in their history availed themselves of all the three, *viz.*, the standard, the war-cry, and the trumpet, or what was the same, some instrument for creating shrill wide-spreading sounds. The Ṛig Veda alludes to banners,* and in the Mahábhárata, the heroism of knocking down the enemy's standard is everywhere highly extolled. The war-cry is, likewise, mentioned in the Ṛig Veda,† and in the great epics. The words used were either religious sayings, or the name of the leader added to the word *jaya* or victory, such as *Jaya Ráma*, "victory to Ráma," or *Jayastu Páṇḍuputráṇám*, "success to the sons of Páṇḍu," or some other word suited to the occasion, very much in the same way as in Europe, and whence, as Sir S. Megouk supposes, armorial mottoes had their origin.

According to the Ṛig Veda, the most ancient instrument for calling troops together, or conveying orders to them, or exciting them to valorous deeds, was the drum. Thus: "War drum, fill with your sound both heaven and earth;

* Wilson's Translation, I., 265, II., 11, 321, IV., 145—266.

† Ibid. I., 105.

and let all things, fixed or moveable be aware of it: do thou, who art associated with Indra and the gods, drive away our foes to the remotest distance. Sound loud against the (hostile) host: animate our prowess: thunder aloud, terrifying the evil-minded: repel, drum, those whose delight it is to harm us: thou art the first of Indra; inspire us with fierceness. Recover these our cattle, Indra; bring them back: the drum sounds repeatedly as a signal: our leaders, mounted on their steeds, assemble: may our warriors, riding on their cars, Indra, be victorious."* But Vyása in the Mahábhárata, does not allude to it. He replaces it by *pánchajanya*, and other forms of conch-shells, with which the heroes of the Great war of Kurukshetra rallied their several corps d'armée.† The conch-shell, however, was not unknown in the time of the Rig Veda, and Kusta refers to "those appliances with which the As'vins sound the conch-shell in the battle for their share of the booty."‡

It is remarkable that at a much later age on the other side of the world the Mexicans were noted for their use of the conch-shell as a military trumpet. Prescott, in his "Conquest of Peru" in one place says, "the Spaniards were roused by the hideous clamour of conch, trumpet, and atabal mingled with the fierce war-cries of the barbarians, as they let off volleys of missiles of every description."

In the most ancient sculptures, such as those of Sánchí the flag is represented as an oblong piece of cloth with or without diagonal crossed stripes like a St. George's cross, or a number of stars. Woodcuts Nos. [illegible] and [illegible], copied from Cunningham's *Bhilsa Topes*. At Bhuvanes'vara it is invariably triangular and of plain ground. The staff is [illegible]

* Wilson's Rig Veda, III., [illegible]

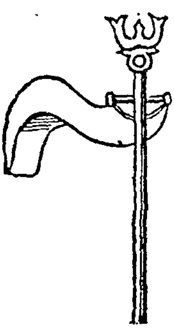
† Very different was the use to which Poseidon assigned the Concha, when he employed his son Triton to blow it to soothe the restless waves of the sea.

‡ Rig Veda, I., [illegible]

mounted, according to the religious faith of the people who bore it, by either a trident or a discus. In ancient literature mention is made of Garuḍas, Hanumánas and crescents, as mountings for the tops of flag-staffs; also as armorial emblems on the ground of the flags. "Thus Aryuna's flag bore the monkey Hanumána, Bhishma's a palm tree, Duryodhana's a serpent, Kripa's a bull."* The last was also the emblem of S'iva whence his name *Vrisha-ketana* or "bull-flagged." The Harivansa makes mention of birds painted on the ground of flags, and in the Rámáyaṇa, Janaka has the title of *Sitádhvaja*, from his standard having borne the figure of a plough. The Agni Puráṇa makes a distinction between the large standard *dhvajá* and the banner *patáká* of minor divisions.† It notices, likewise, particular colours as belonging to particular chiefs. The Kumára-sambhava describes flags of China silk set up in the palace of the mountain king Himálaya on the occasion of his daughter's marriage.‡ But ordinarily, I suppose, cotton cloth was



No. 164.



No. 165.

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* Wilson's Works, IV., 296.

† प्रासादस्य तु विस्तारो मानं दण्डस्य कीर्त्तितं ।
शिखरार्द्धेन वा कुर्य्यात् तृतीयांशेन वा पुनः ॥
द्वारस्य दैर्घ्याद् द्विगुणं दण्डं वा परिकल्पयेत् ।
ध्वजयष्टिर्देवगृहे ऐशान्यां वायवे तथा ॥
क्षौमाद्यैश्च ध्वजं कुर्य्याद्विचित्रञ्चैव वर्णिकं ।
घण्टाचामरकिङ्किण्या भूषितं पापनाशनं ॥
दण्डाग्राद्धरणीं यावत् व्यस्तैकं विस्तरेण तु ।
महाध्वजः सर्व्वदः स्यात् तुर्य्यांशाङ्गोनतोच्छ्रितः ॥
ध्वजे चार्द्धेन विज्ञेया पताका मानवर्ज्जिता ।
( अग्निपुराणे ध्वजारोहणाध्याये ५१ पत्रे । )

‡ सन्तानकाकीर्णमहापथं तच्चीनांशुकैः कल्पितकेतुमालः ।

the material used. In the Sháhnámeh the leather apron of a blacksmith is made to do duty for a banner, and Ovid notices a bundle of hay used for that purpose. Among the Egyptians, figures of birds, beasts, and reptiles mounted on long poles served the same end, but the Hindus seem to have invariably used cloth; at least there is nothing to show to the contrary. Graven stones do not, however, help us much in the matter.

Horse.

Next to arms and armour, the most important requirements of ancient Indian warfare were horses and elephants. Probably when the Aryans first came to India, they depended upon their horse, with a very superior breed of which, the progenitor of the modern Arab horse, they were familiar in their primitive homes in the plateau of Central Asia. In India, they subjugated the elephant; but soon after, both the horse and the elephant held a lower position than the chariot, though in the time even of the Mahábhárata, elephants disputed the supremacy with cars, and such distinguished chiefs as Bhagadatta, Uttara, Duryodhana, Anvinda and others, issued forth to battle, mounted on their elephants. At the time of Alexander's invasion, elephants had all but completely superseded cars, for the Greek historians, while dwelling largely on the mighty phalanx of king Porus' elephants say nothing of his war-chariots: this may, however, be accounted for on the supposition that the elephants were novel and startling, whereas the car was familiar to the Greeks, and on the whole not very dangerous to them. The Hindus knew exactly the purposes for which horses and elephants were most valuable, and placed them in the wings of their army, where they could be manœuvred without interfering with the action of the infantry in the centre, on which they depended, as the mainstay of military arrays. They also wrote several treatises on the management of those animals in health and

disease. Unlike most other nations of antiquity, they employed the horse in war, both for the draught of their chariots and for the saddle, and that from the very earliest period of which we possess any notice. Driving was perhaps more fashionable than riding, for the principal heroes always appeared in battle, as among the ancient Assyrians* and Egyptians, on chariots, and prized themselves on being *rathís* or owners of cars. Mounted troops, however, were more common, and in the Ṛig Veda Agni is in one place invoked "to come mounted on a rapid courser,"† and in another place is likened to "a rider-bearing steed."‡ The As'vins made Pedu "mount a swift charger."§ Madhuchhandas, son of Vis'vámitra, prays that he may, "under the protection of Indra, repel his enemies, whether encountering them hand to hand, or on horseback." ‖ The horse was, likewise, used as a beast of burden, and the As'vins are accordingly invoked to come to the sacrifice " with viands borne on many steeds."¶

Of the particular broods of horses the Hindus used before the Christian era, some information will be given elsewhere. The Vedas praise highly a species called *Nayut.* Subsequently the most noted and highly prized was a Central Asian race called *Báhlika* or of Balkh.** Guzerat, Beluchistan, Kámboja, †† (ancient Cabul) and Persia, also yielded many hardy animals, which were generally esteemed by the heroes of the great war of the Mahábhárata. Of their likeness, however, we have no remains in stone. The horses figured at Sánchí, Amarávatí and Bhuvanes'vara are so much alike, that it is impossible to decide upon their caste.

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* "The chariots appear to have been used by the King and the highest officers of State, who are never seen in battle on horseback; or, except in sieges, on foot." Layard's Nineveh, II., 348.

† Wilson's Ṛig Veda, II., 220.

‡ Ibid. I., 179.

§ Ibid. IV., 154.

‖ Ibid. I., 20.

¶ Ibid. I., 78.

** Ibid. IV., 137.

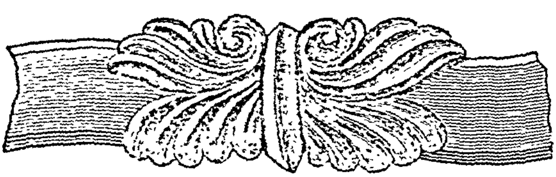
†† Mahábhárata Sabhá Parva.

The favourite colour in Vedic times was the chestnut or the colour of the sun, *aruṇa*. This is what was to be expected, for the Central Asian sire of the Arab was a chestnut; but it is worthy of note that the partiality for the colour should have been common both among the Vedic Aryans and Arabs. Among the latter the belief has been immemorial that the chestnut always betokened superior merit, and this is characteristically evinced in one of their precepts, which says: "If you are told that a horse has been seen flying in the air, ask what colour it was; and if the answer be 'chestnut,' believe it." There is also a story, often told, of an old chief, dim with age, who, when flying before his enemies, enquired of his youthful son on whose eyes he had to depend, "What horses do they ride?" "My father," said the youth, "they be white horses." "Go we, then, towards the sun, and they will melt away, as the snow." After a while the chief asked again, "What horses now, my son?" "My father, they be black horses." "Go we, then, on the hard ground, and their hoofs will cleave to the earth." A third time the chief asked, "What horses now, my son?" "My father," was the answer, "they be chestnut horses." "Quick then, quick," exclaimed the old chief "or we be dead men." It is of course impossible in the present day amidst such high breeding and constant crossing as obtain in England, to determine by the colour the quality of a horse, and it would be easy to get a counterpoise for the long array of chestnuts, such as Stockwell, Thormanby, Kettledrum, Blair Athol, Hermit, Favonious, Fille de l' Air, and other distinguished winners of the blue ribbon of the English Derby, but the fact of the belief in such early times as those of the Rig Veda is significant. It is scarcely likely that even the most inveterate believer in the moderneity of the Vedas would assume that they got it from the Arabs. In one or two places the sun is described as having glorious white horses; spotted mares, (dap-

ple greys?) are also alluded to,* but subsequently, milk-white coursers were preferred. In the Lalita-Vistara,† the dark grey, of the colour of the cloud (iron-grey), is most extolled as befitting an emperor.

Saddle and bridle.

The equipment for saddle horses, as seen in sculptures, consist generally of a thick large padding kept in its place by a girth, a croupière, sometimes trellised, and a breast-band, and covered over with a housing or saddle cloth of a rich pattern. Nothing like a wooden saddle is anywhere perceptible, and stirrups are also wanting. This is, however, not the case with padded saddles on lions; at Bhuvanes'vara they are invariably provided with well-formed stirrups, and human feet are represented thrust in them. In a piece of sculpture, apparently of an old date, in the Indian Museum, there are distinct delineations of stirrups formed of a ring with a broad, flat foot-rest. They are hung with straps proceeding from under the saddle-cloth, or pad. The bridle includes a forehead strap, cheek pieces, gullet, and nose band, all studded with metal bosses. Tassels near the ears are frequently met with. A chamfron, sometimes straight, and sometimes crossed, is also generally added, and a martingale of cloth is not uncommon. The rein is single and plain, never studded as the other parts of the bridle are. It was most probably knotted or sewed on the bit, but in a piece of sculpture in the Indian Museum, brought from Bhuvanes'vara, the joint dis-



*No. 166.*

* "Maruts, together worshipped with sacrifices, standing in the car drawn by spotted horses, radiant with lances, delighted by ornaments." Wilson's Rig Veda, II., 303.

† Lalita Vistara, p. 17.

plays a chaste floral ornament, most likely the representation of a metal boss, occupying the place of the buckle. (Woodcut No. 166.) A positive buckle in the sense in which the word is now understood I have nowhere met with in ancient Indian sculptures, nor a description of it in Sanskrit literature.

Snaffles.

The form of the bit is not perceptible, but rings are occasionally seen which suggest the idea of a snaffle; and the Agni Purána recommends five different kinds of snaffles as the most appropriate. One of these is said to have been wavy *(gomutra)*, another, crooked *(kuṭila)*, a third, twisted or plated *(veni)* the fourth, a chain of lotuses or rings *(Padmamaṇḍalamálá)*,, and the fifth, jointed *(garbhuka)*. These are very different from what Arrian describes in his Indica. He says, "the Indians have neither saddles nor bridles, like those which the Greeks and Celts make use of; but instead of bridles they bind a piece of raw bullock's hide round the lower part of the horse's jaws, to the inner part of which the common people fix spikes of brass or iron, not very sharp, but the richer ones have them of ivory. Within the horse's mouth is a piece of iron like a dart to which the reins are fastened."* Commenting on this passage, Mr. Fergusson observes, "If this was the mode employed by the Indians in Alexander's time, they seem to have benefited by their intercourse with the West before the Sánchí sculptures were executed. If any one will compare the head stalls of the bridles represented in the plate XXXIV. with figs. 6, 7 and 8 of Plate III., they will see how perfect the head gear of these horses had become."† Arrian, however, drew his materials from Megas-

* Indica, Chap. XIV.

† Tree and Serpent Worship, p. 134. In support of this deduction Professor Weber's conjecture of the Sanskrit word for a snaffle, *Khalina* (W. takes it for the bridle) being derived from the Greek *χαλινος*, may be quoted. But the admission by Arrian of the use of an iron bit, and the fact of reins for horses being mentioned in the Ṛig Veda are adverse to the theory.

thenes, and the latter says, "When it is said that an Indian by springing forward in front of a horse can check his speed and hold him back, this is not true of all Indians, but only of such as have been trained from boyhood to manage horses; for it is a practice with them to control their horses with bit and bridle, and to make them *move at a measured pace* and in a straight course. They neither, however, gall their tongue by the use of spiked muzzles, nor torture the roof of their mouth."* With this flat contradiction by a higher authority it would be futile to rely on the statement of Arrian, or the accuracy of the deduction drawn from it; but it seems rather unaccountable, why the people, who guided their horses by putting an iron dart inside the mouth and tying the reins thereto, should put a spiked band on the nose? Not being attached to the reins, it could serve no useful purpose in checking the horse, and the idea, therefore, suggests itself that it was the martingale with its studded nose-piece which Arrian mistook for a substitute of the bit. As to the effect of Alexander's transient visit, all we have to say is that, intercourse with Europeans for near three centuries, and a century of English domination, have not yet made the Hindustani exchange his *chárjámá* or pad for the wooden saddle. If it be impossible to suppose that the Indian Aryans had the capacity to design a bridle for their horses which they brought with them from the plateau of Central Asia, at least two thousand years before Christ, and used from time immemorial, and a model be really required for them to copy, the Assyrians or Persians were more likely to afford it than Alexander or his successors, the Greco-Bactrians. Looking at the caparisoned horses in Layard's plates, and comparing them with similar figures in Khaṇḍagiri and Sánchí, one sees a great deal of similitude to form a conjecture; a close examination, however, brings to light many marked peculiarities which leave no room for

* McCrindles Translation: Fragment XXXV., p. 89.

doubt as to their origin being different. The mode of dressing the mane and forelock was also different. The Assyrians hacked the mane, or braided it. No Indian ever hacked the mane, but braiding was not unknown. In our days it is common enough. The Hindus dressed the forelock in the form of a flowing arching crest; the Assyrians tied it in three tiers or in three separate tufts. Sometimes the bulk of the forelock in India was increased by the addition of false hair; and the following passage from the *Vikramorvashí* of Kálidása describes a yak-tail crest.

> "The waving chowrie on the steed's broad brow
> Points backward, motionless as in a picture;
> And backward streams the banner from the breeze
> We meet—immoveable."*

Armour for horses.

In one or two instances, I noticed something like a crinet on the neck, but in the absence of iron accoutrement of other kinds, I imagined it was due to a peculiar style of dressing the mane. In Rájputaná there are several sculptures of complete suits of iron armour including the chamfron, the crinet, the gorget, the *poitrel*, the *croupiére à jupe*, and the leg-guard; but they are of the middle ages, and were probably copied from the chargers of the Moslem invaders. I have nowhere met with a name for iron shoes for horses; but a passage in the Ṛig Veda referred to above, (p. 301), suggests the idea of such shoes.

Harness for draft horses.

The harness for draft horses in the olden time included a body-roller, a collar, and a bridle. The body-roller was apparently plain, and tied where, in our times, the surcingle is buckled; but without any padding or cloth underneath; differing in this respect from the Assyrian harness, which always included a

* Wilson's Hindu Theatre, I, p 199.

rich saddle-cloth.* It was intended to prevent the traces from hanging low when the horse was checked, or backed. The collar was light below, but heavy at top, something like the wooden frames which were until recently used for keránchí tattoos. In fact, the idea of a collar was derived from a bullock's hump, and the contrivance was designed with a view to give a false hump to the horse, and the traces were so adjusted as to throw the weight much higher up than the point which bears the greatest strain under an ordinary collar. The remnant of this hump is represented in English dray horse-harness by a semicircular piece of leather on the top of the collar, and until recently it also appeared prominently in gig harness. The Egyptian harness-saddle was designed in the same way, placed on the highest point of the withers, and kept there by two bands, one forming a collar, and the other a girth. This was also the case with the ancient Greek harness, in which the yoke was tied on the withers by two bands, one of which served the purpose of a girth, the other, the λέπαδνον, was, according to Arnold, "a broad strap which fastened the neck of the horse to the yoke." The Assyrian breast-band, as described in the note below, was very much of the same kind. The Egyptians, the Greeks, and the Assyrians, however, differed from the Indians in making their horses draw their chariots

* The following is Mr. Layard's description of the earliest Assyrian harness: "Round the necks of the horses were hung tassels, rosettes, and engraved beads. Three straps, richly embroidered, passing under the forepart of the belly, kept the harness and chariot pole in their places. A breast-band, adorned with tassels, was also supported by these straps. To the yoke was suspended a very elegant ornament, formed by the head of an animal, and a circle, in which was sometimes introduced a winged bull, a star, or some other sacred device. It fell on the shoulder of the animal, and to it was attached three clusters of tassels. Embroidered cloths, or trappings were frequently thrown over the backs of the chariot-horses, and almost covered the body from the ears to the tail. They were kept in their place by straps passing round the breast, the rump, and the belly." Layard's Nineveh, II., 354.

by a yoke, while the latter depended on traces, and had no yoke. Wilkinson says, that the former "had traces, but on the inner side only." Such traces could not have been very effectual either for steady draught, or for preventing the horses from falling out, and the main dependence must have rested on the yoke, which he adds "sufficed for all the purposes of draught, as well as for backing the chariot; and being fixed to the saddle, it kept the horses at the same distance and in the same relative position, and prevented their breaking outwards from the line of draught."* In Indian rich trappings, a trellised croupiére was added to serve the purpose of a kicking-strap, but it was not common. The bridle differed in no respect from what was used for saddle-horses, except, perhaps, in having gaudy plumes and rosettes over the head, and by the ears.

Elephant trappings.

The housing for the elephant, like that for the saddle-horse, consisted of a thick padding covered over with a piece of carpetting, or embroidered cloth, or trapping of some kind or other, and a smaller one of the same style for the neck; the former held to its place by girths, croupiére and kicking-straps, and the latter by ropes tied round the neck. By way of ornaments, strings of bells round the neck and the rumps, and pendant from the head, were freely employed. In some cases metallic chains were used instead of ropes; but this was not common. (Illustrations Nos. 29 and 30 in my 'Antiquities of Orissa.') No howdah has anywhere been met with; but in the Agni Puráṇa allusion is made to one "which should be made of wood cut out of trees that emit a milky sap when wounded; it should be fifty fingers broad, and three cubits long, painted and decorated with gold," and Professor Wilson says, "the more usual riders on elephants were soldiers of a lower grade, several of whom were placed on the animal's back

* Ancient Egyptians, I, 353

n a kind of chair or howdah, and were armed with bows and arrows and other missiles. According to Megasthenes, as quoted by Strabo, each Indian elephant carried three archers besides the driver, and his account agrees well enough with what may be inferred from incidental notices of Sanskrit writers."*

Chariots.

The oldest Indian car of which we have a drawing occurs among the paintings of the reign of Thothmes III., (B. C. 1495). It is said to have been a present from a vanquished people of the name of *Rot-n-no*, Sanskrit *Rathina* or "charioteers," who have been indentified by the late Henry Torrens, author of the *Scope and Uses of Military Literature*, with the Vedic Aryans of the Pánjab.† In style and make it closely resembles the war chariot of the Sánchí bas-reliefs, a car on two wheels, with a curricle body, open behind, and drawn by two horses; but it has only one pole with a



No. 167.

* Essays, II., 295.

† Mr. Layard does not subscribe to this. He quotes Mr. Birch, wh inclined to identify the Ruten-nu, or Lodan-nu, of the statistical tablet of with the Cappadocians, or Leuco-Syrians, inhabiting the country to th and South of the Taurus, who, he conjectures are also represented at Kho He adds: "That the Ruten inhabited a country adjoining the Assyri be inferred, from their being mentioned in geographical lists between N Mesopotamia) and Singara (Sinjar)." Layard's Nineveh, II., 405.

yoke at the end, whereas the Sánchí specimens have three or rather one long pole in the middle curving upward near the neck of the horses, and two short shafts on the sides reaching only as far as the flanks, but no yoke.* (Woodcut No. 167). For a two-horse conveyance this is the simplest contrivance, and the ordinary practice was to drive pairs, in the matching of which, great attention was paid by their owners.† But one-horse chases were not altogether unknown; perhaps they were more common, but, not being worthy of laudation, were not often noticed in the Rig Veda hymns, though in one place we find a verse beginning with the words: "This invigorating praise, like a horse attached to a car, has been addressed thee, who art mighty and fierce." ‡ The Rámáyaṇa makes mention of cars drawn by asses. In the time of the Ṛig Veda, there were three shafts to each car, and they are described as triangular. "Come As'vins with your three-columned triangular car." § "We have placed you, Dasras, in your golden three-shafted chariots, going by an easy road to heaven." ‖ Probably the central pole with the two short side shafts made the triangular three poles. But whether the triangle was formed by the projection of the long central pole or by the body itself, does not appear. The quadriga of the Etruscans must have had three poles to drive four horses about.¶ The wheels were usually two, but a third was sometimes added, as tri-wheeled carriages are greatly extolled.

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* By a curious mistake on the part of the artist, the outer trace in Mr. Fergusson's drawings, plates III., XXXIV. and XXXVIII., is tied to the tail of the horse. In plate XXXV., it is made to go round the rumps like a kicking-strap. In plate XXXIII., the form of the shaft is unmistakable, but it is made of a piece with the periphery of the wheel. In the woodcut above given, the true form has been attempted to be restored.

† The old Assyrian chariot had three horses, and in this respect differed from the Indian and Egyptian which had two. Layard's Nineveh, II. 350.

‡ Wilson's Ṛig Veda, IV, 151. § Ibid. I., 126. ‖ Ibid. II, 60.

¶ Denny's Cities and Cemeteries of Etruria.

The dash board was in the finer specimens panelled, but in common vehicles made either of cane-work, or open with a bar in front, like the Greek and Etruscan aulyx, for the reins to rest upon. It also yielded considerable support to the warrior in the attempt to hurl a heavy missile, and for other purposes. The chariot of the sun is described in the Puráṇas as having one wheel, one having been taken away by Indra. The ancient Roman chariot had large scythe-like blades projecting from the axles, rendering approach to the cars from the sides by enemies dangerous. A similar method of arming the wheels was probably adopted by the ancient Hindus, for we read in the Ṛig Veda, of "golden wheels, armed with iron weapons."* But the Sánchí models show no trace of these. The number of spokes to each wheel was originally five;† but a greater number was subsequently introduced, and in the Sánchí chariot above shown there are sixteen. The earliest Assyrian and Egyptian chariots had six.

Ordinarily the body was made of a wooden frame-work covered with leather,‡ and open above like that of a tandem; but sometimes an awning on top was put upon three posts, and the whole surmounted by a flag. The Mahábhárata describes a square body with four posts, like the modern ekkás of northern India. It is possible that both styles were common during the Vedic epoch. In the Sánchí specimens the accommodation available in these vehicles was barely sufficient for two persons to stand or sit side by side. The Grecian Διφρος, as its name implies, was intended only for two persons; and the Roman bore only the *bellator*, or warrior, and the *aurega*, or driver. The Egyptian could carry three persons. The sculptures of Assyria and Persia show no more than two persons in each. But the Ṛig Veda alludes to three benches as fixtures in each car, and the

* Wilson's Ṛig Veda, I., 226. † Ibid. III., 475. ‡ Ibid. IV., 73.

space sufficient for several persons and some goods.* The Rathas of the Rámáyaṇa and Mahábhárata were, likewise, large and commodious, and generally carried a large supply of arms, differing in this respect from those of Egypt, Persia and Greece, which never had any covering, awning, or hood, and were seldom large enough for more than three persons, all standing or seated abreast on one bench. The Grecian chariot, though differing in some respects in the make of its wheels, poles, &c, from the Vedic model, bore a close relation to the Sánchí examples; and to make that manifest, I shall here quote Homer's description of the curricle of Achilles.

"Ἥβη δ' ἀμφ' ὀχέεσσι θοῶς βάλε καμπύλα κύκλα,
χάλκεα, ὀκτάκνημα, σιδηρέῳ ἄξονι ἀμφίς.
τῶν ἤτοι χρυσέη ἴτυς ἄφθιτος, αὐτὰρ ὕπερθε
χάλκε' ἐπίσσωτρα προσαρηρότα, θαῦμα ἰδέσθαι.
πλῆμναι δ' ἀργύρου εἰσὶ περίδρομοι ἀμφοτέρωθεν.
δίφρος δὲ χρυσέοισι καὶ αργυρέοισιν ἱμᾶσιν
ἐντέταται· δοιαὶ δὲ περίδρομοι ἄντυγές εἰσι.
τοῦ δ' ἐξ αργύρεος ῥυμὸς πέλεν· αὐτὰρ ἐπ' ἄκρῳ
δῆσε χρύσειον καλὸν ζυγόν, ἐν δὲ λέπαδνα
κάλ' ἔβαλε, χρύσει' ὑπὸ δὲ ζυγὸν ἤγαγεν Ἥρη
ἵππους ὠκύποδας, μεμαυῖ' ἔριδος καὶ ἀϋτῆς."

Iliad, e. 722—732.

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* The following extracts from Wilson's Rig Veda contain allusions to t[he] form and appurtenances of the Vedic car. "Let your spacious, and brigh[t-] rayed chariot, Mitra and Varuṇa, blaze before them, like the sun, filling the[m] with fear." (II., 6.)

"Showerer of benefits, harness the car which has three benches, thr[ee] wheels, and is as quick as thought; with which, embellished with three meta[ls] you come to the dwelling of the *pious* worshipper, and in which you tra[vel] like a bird with wings." (II., 184) "With that chariot, lords of men, wh[ich] is your vehicle, which has three benches, is laden with wealth,"&c. (IV., 15[...]) "Conduct here, Aśvins, your radiating wealth-laden chariot." (IV., 15[...]) "Agni, kindled into flame, come to our presence in the same chariot with Ind[ra] and with the swift gods." (II., 331)

On the whole, it may be well said that the ordinary war chariots of the six great nations of antiquity, Indian, Egyptian, Assyrian, Persian, Grecian and Roman, were very much alike, though not without peculiarities to mark their ethnic relations. The many-wheeled car, such as that of Jagannátha, has not been met with; in sculpture but a square platform set on four wheels, and having an awning on four posts, occurs on the temple of Halabeed in Southern India, and this is, perhaps, the first germ of the more elaborate structures of the present day.

The ancient chariots were highly prized, and great pains were taken to embellish them in a manner befitting the rank of the owner. In the Rig Veda, they are frequently described as of "gold" or "golden." One is described as ornamented with "three metals"; supposed to have been gold, silver and copper; others as having gold fellies, or wheels, and golden trappings. "The Pajras, the kinsmen of Kakshivat, rub down the high-spirited steeds decorated with golden trappings."* "Harness with traces to thy car, thy long-maned ruddy (steeds to come) to the sacrifice."† "Sávitrí has mounted his high-standing chariot, decorated with many kinds of golden ornaments, and furnished with golden yokes."‡ "Indra, the abounding in acts, the bountiful, has given us, as a gift, a golden chariot."§ "May Indra bestow, upon me ten handsome golden chariots."|| "Ascend, As'vins, your sky-touching chariot with golden seat and golden reins. Golden is its supporting shaft, golden the axle, both golden the wheels."¶ "Rapid as thought (come) with your golden chariot drawn by quick-footed steeds."** "Dasras, riders in a golden chariot, drink the sweet beverage."†† Many other passages like these may be easily cited to show, that the

* Wilson's Rig Veda, II., 18. † Ibid. II., 335. ‡ Ibid. I., 98.
§ Ibid. I., 77. || Ibid. IV., 5. ¶ Ibid. IV., 238. ** Ibid. IV., 239.
†† Ibid. IV., 253.

Vedic chariots were generally very richly ornamented. The Rámáyaṇa and the Mahábhárata in the same way make of pearl fringes and jewelled [illegible] for the chariots of great chiefs and distinguished warriors; and flags and banners for their tops were held in great requisition, and the glory of knocking down a banner from the top of a car was highly esteemed. The Puráṇas are even more diffuse in their praise of the ornaments of ancient Indian cars, and their descriptions lead me to suppose that their ideal of a car was the *ratha* of the modern times, a pyramidal structure of many storeys, mounted on a number of wheels, a very cumbrous apparatus altogether, utterly unfit for warlike purposes, and not founded on the model of the Greek chariot. Thus the Brahmavaivarta Puráṇa, in describing a chariot in which certain Brahman women [illegible] descending from the sky, says: "It was a most excellent car made of gold, mounted with mirrors made of [illegible] [illegible] with jewels, furnished with posts made of [illegible] [illegible], [illegible] with *kalasas* of valuable gems, having white *chamaras* hanging from different places, bright with [illegible] as fire, bedecked with garlands of Párijáta flowers, mounted on a hundred uniform wheels, quick moving like thought, and most charming."* The Deví Puráṇa thus describes a car for the goddess Durgá, who, it seems, was formerly taken about in a car much in the same way as Jagannátha is in the present day, and Buddhist relics were in former times: "The posts should be made of ivory, mounted with

* [illegible]
[illegible]
[illegible]
[illegible]
श्वेतचामरसंयुक्तं वह्निशुद्धांशुकान्वितं ।
पारिजातप्रसूनानां मालाजालविराजितं ॥
शतचक्रसमायुक्तं मनोयायि मनोहरं ।

showy golden ornaments, and set with rubies and other jewels. The car of the goddess should have seven magnificent storeys, with curtains of silk cloth and mountings of crescents, and decorated with bells, large and small, gongs, *chámaras*, rings, pennons, flags, and looking-glasses. Such a car should first be worshipped, Indra, with flowers of the Jessamin tribe, and the Párijáta, with agallochum and sandal paste, with the aroma of fragrant pastiles, and then the image of the goddess should be placed in it."*

Nor was this fondness for the decoration of their chariots a peculiarity among the Hindus. The other great nations of ancient times were equally ardent in their desire to display their wealth and consequence by profusely ornamenting their cars. "The latter chariots of the Assyrians," says Mr. Layard, "were often completely covered with ornaments; those represented on earlier monuments had a very elegant moulding or border, round the sides. They were probably inlaid with gold, silver and precious wood; and also painted. Such were the chariots obtained by the Egyptians from Naharaina, (Mesopotamia), fifteen centuries before Christ. In the statistical tablet of Karnak are mentioned thirty chariots worked with gold and silver with painted poles as brought from that country."† These, as already

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* दन्तिदन्तमयैर्दण्डैर्हैमवद्धैः सुशोभनैः ।
विचित्रपद्मरागाद्यैर्मणिभिरुपशोभितैः ॥
रथन्तैः कारयेद्देव्याः सप्तभौमं मनोरमं ।
दुकूलवस्त्रसञ्छन्नमर्द्धचन्द्रोपशोभितं ॥
घण्टाकिङ्किणिशङ्खाढ्यं चामरैः कटकान्वितं ।
पताकाध्वजशोभाढ्यं दर्पणैरुपशोभितं ॥
तं रथं पूजयेच्छक्र जातीकुसुममाल्लिकैः ।
पारिजातकपुष्पैश्च यक्षकर्दमचन्दनैः ॥
सुगन्धधूपितैः कृत्वा देवीं तत्र निवेशयेत् ॥

shown above, are believed by a competent authority [illegible] to have been of Indian origin. [illegible]

Much of the precious ornaments mentioned by Sanskrit writers was doubtless due to their glowing and poetical imagery; but their descriptions imply a substratum of some ornaments in addition to the absolute constructive requirements of the vehicles. What those ornaments exactly were it is now impossible to ascertain; but the frequent mention of gold and precious stones as materials of decoration, would suggest the idea of their having been to some extent real, the rest being made up of brass knobs and plumes, many-coloured cloths, fringes of netting, and tassels. Such ornamented chariots were intended for ordinary use, and they were also provided with hoods or coverings, rugs and screens, for protection from sun and rain, and other appliances. In the Dictionary of Amara Sinha, separate names are given for such vehicles, such as *Dvaipa* and *Vaiyághra* for cars having coverings of tiger skins; *Pándukambalin*, *Kámbola*, *Vástra*, for woollen-covered cars; *[illegible]*, non-military car, &c. Hemachandra, in his Sanskrit vocabulary, enumerates several kinds of chariots adapted for various purposes of life. The names he gives are *[illegible]-ratha*, *Syandana-ratha*, *Pushpa-ratha*, *[illegible]-ratha*, *[illegible]-ratha*, *Parighátika*, *Karni-ratha*, and *Rathagarbhaka*. The first two were intended for proceeding to the battle-field; the third for enjoyment; the fourth, for carrying about images of gods; the fifth, for magistrates; the sixth, for travelling; the seventh, for fighting; and the eighth, for ascending in the air. How these several vehicles were constructed, and in what respects they differed from each other, the author does not notice. Most of the words have been of late used in Sanskrit literature as synonymous terms; in the Rámáyana, the Pushparatha has been assigned to Ráma for his journey from Ceylon to Oudh; and the *Vaináyika*, which

appears like an epithet for *Jogya-ratha* in the passage quoted,* is explained by Professor Wilson as a war-chariot, and not a state carriage. It may fairly be presumed that the various names given in the vocabulary are not synonyms, but terms denoting vehicles differing from each other in shape, size, make, and character, and that vehicles of various kinds, large and small, were in use among the ancient Hindus, though we are not in a position now to point out their distinctive peculiarities.

Covered carriages are frequently mentioned, and, seeing that the constructive ingenuity necessary for converting an open cart into a covered vehicle is exceedingly small, there is no reason to doubt the former existence of such conveyances. It is worthy of note, however that in the Sánchí bas-reliefs, the open war-chariot shown above in the woodcut is the conveyance selected for a religious procession, and the sacred object placed in it is shielded from the rays of the sun by an umbrella held over it. It may be asked, had the people conveyances with hoods or awning for use at the time, why should they have rejected them and brought forth so insignificant a vehicle for a ceremony, the main object of which was to produce a grand impression on the minds of the common people? A large covered van or car is far better adapted for decoration and show than an ancient war-chariot, and the testimony of the Rámáyaṇa and the Mahábhárata leaves no room for doubt that such large structures were known. To reconcile this conflict, I can only suppose that custom—and custom in matters of religious ceremonies is all-powerful—must have decided in favour of the war-chariot. In the beginning of

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* युद्धार्थे चक्रवद्याने शताङ्गः स्यन्दनो रथः ।
संक्रीड़ार्थः पुष्परथो देवार्थस्तु मरुद्रथः ॥
योग्यो रथो वैनयिकोऽध्वरथः परियानिकः ।
कर्णी रथः प्रवहणं डयनं रथगर्भकः ॥

the fifth century. Fa Hian, however, found in Behar something very like the modern ratha used in carrying about Buddhist images in religious processions. He says, "Every year, in celebration of the eighth day of the moon, they (the people) prepare four-wheeled cars, on which they erect bamboo stages, supported by spears, so that they form a pillar two *chang* high, having the appearance of a tower. They cover it with a carpet of white felt, upon which they place the images of all the celestial divinities, which they decorate with gold and silver and coloured glass. Above they spread an awning of embroidered work; at the four corners are chapels, having each a Buddha seated, with Bodhisattwas standing beside him."*

The drivers of the chariots among all the six races generally occupied the left side, but they never held the subordinate position which Jehus does in the present day. Looking to the manner in which Homer makes his heroes treat their charioteers and the familiarity with which a driver is represented as talking with a son of the Great Rameses, Sir Gardner Wilkinson thinks "that we may conclude that the office in Egypt and Greece was filled by persons of consideration, who were worthy of the friendship they enjoyed."† In India, in the same way, the *Sárathi* was always held in high respect, and even the great Krishṇa did not think it unbecoming his dignity to become the charioteer of Arjuna. Arjuna, on his part, acted in the same capacity for Uttara, son of Viráṭa; and Mátali, the *Sárathi* of Indra, is represented as an adviser in many points to Ráma and Dushmanta.‡ Other charioteers seem to have enjoyed equal distinction. In fact, the warriors and the charioteers were either men of nearly equal rank, and both joined "in the labours and glory of the fight," or the office was awarded

* [illegible], p. [illegible]. † *Ancient Egyptians*, I. 337.

"as a mark of distinction and trust" for distinguished service. Hence it is that the art of chariot-driving was held as an important gentlemanly accomplishment, and the heroes of ancient days always prided themselves upon their proficiency in it.

The numbers of chariots employed for military purposes were great. According to the Amarakosha, every battalion (*váhiní*) of four hundred and five foot-soldiers included eighty-one cars and two hundred and forty-three horse; three such battalions formed a *pritaná*; three *pritanás* formed a *chamu*; three *chamus* constituted an *aníkiní*; and ten such *aníkinís* an *akshauhiṇí* or complete brigade, including twenty-one thousand eight hundred and seventy cars, the same number of elephants, sixty-five thousand six hundred and ten horse, and one million nine thousand three hundred and fifty foot-soldiers.* It is doubtful if any prince had anything approaching to such a mighty host for his *corps d'armée*, but the arrangement and nomenclature in a dictionary indicate that large assemblages of cars were not quite uncommon.

If this be admitted it must follow that roads for such vehicles were also extant. The great epics describe urban roads as wide and spacious, lined on both sides with shops of various kinds and private mansions of elegance and beauty. The Rámáyaṇa notices the practice of watering the street to allay the dust, (ante. p. 21), and refers to a large trunk road extending from Oudh to the Pànjab. The Vedas also make mention of roads for cars and waggons, and they offer very strong presumptive evidence of a settled, civilized life among the people as distinct from a nomadic or purely pastoral existence. It is impossible to say whether the roads were ever metalled with stones or bricks: perhaps they were not; but in a country so abounding in kankar,

* Other numbers are given in others texts. See Oppert's Weapons, p. 5.

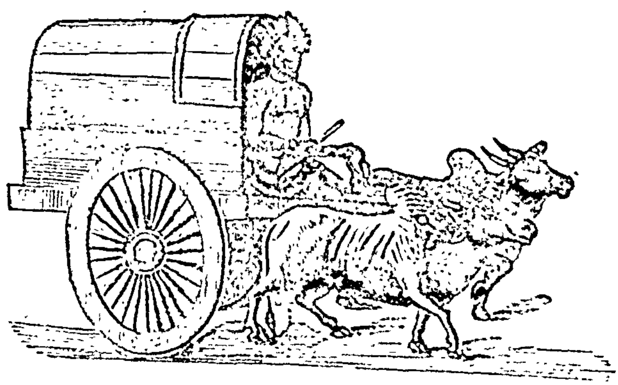
as the North-Western Provinces are, and occurring as that substance does often on the very surface of the earth, it could have scarcely escaped the notice of men who made roads, and watered them to keep down dust.

Waggons.

The Rig Veda makes mention of waggons, so do the great national epics, and the lexicon of Amara Sinha gives distinct names for covered conveyances of several kinds, as also for open carts for the carriage of goods. The *Mrichchhakati*, which as already stated, dates, according to Wilson, from the second century before the Christian era, and under the lowest computation cannot be brought down below the beginning of that epoch, takes its name from a fictile model of a cart, which had been given to a child as a substitute for a golden one, which it had seen with a playmate, and wished to have, but which could not be provided by his indigent parents. In the play itself, there are descriptions of roads blocked by a great number of carts, of covered litters provided with cushions, having doors behind, and drawn by two bullocks, and carts and litters of different qualities,—all which cannot but be accepted as indications of vehicles of various descriptions having been in common use. I do not remember to have any where read of a one-bullock cart; but in the tenth mandala of the Rig Veda, mention is made of a waggon or car which was drawn by a team of which one was a bull and the other a buffaloe. A sage, named Mudgala, is said to have achieved great success in the battle-field by driving this ill-matched pair. And seeing that mention is made in that work of a team of four bullocks yoked to a plough, it may be very reasonably conclud[illegible] that occasionally waggons had more than [illegible]. Th[illegible] and four bullocks to a cart or waggon is [illegible] in the present day in the North-W[illegible] nature of the country never rendered [illegible]

of ten to twenty bullocks, so common in Cape Colony, necessary, or desirable, in India.

Of the form of the covered waggon we have only one example in the Amarávatí sculptures, and it corresponds pretty closely with the description given in the *Mrichchhakaṭí*, a two-wheeled vehicle drawn by a pair of bullocks, and opening behind to receive the riders, the driver being seated in front in the same way as in the present day. (Woodcut No. 168, copied from Fergusson's "Tree and Serpent Worship," plate LXV.) Indeed, the persistency of custom in this respect appears so great, and the progress of art so cramped, that no appreciable change has been effected within the course of the last sixteen hundred years, and the North Indian waggon of to-day seems to differ in no respect from what was in use in the fourth century of the Christian era.



168.

Whip and goad.

The whip as delineated at Sánchí is a stiff leather thong attached to a short handle, very like the modern *koḍá*. It was called *kasá*, and under that name is frequently mentioned in ancient writings. For elephants the *ankus'a*, or a short staff mounted with an iron crook, was the only instrument in use for guiding them, and it remains unchanged to this day. The ankus'a shown in Woodcut No. 169, taken from the Sánchí bas-reliefs, differs in no respect from the instrument of that class now in use all over India.

Palankeens, &c.

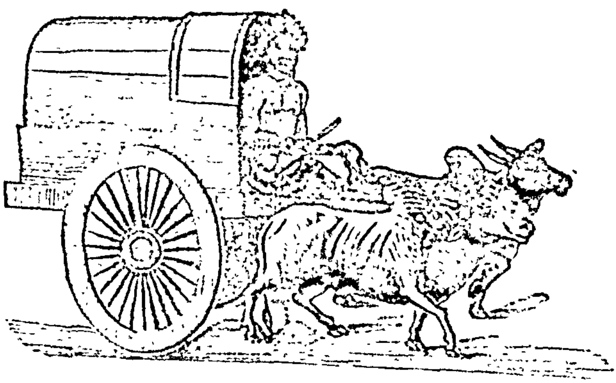
The palankeen *(Sivikà)* is frequently named in the great epics and other Sanskrit works; but it has not yet been met with in sculptures, and its ancient form, therefore, remains unknown. In its place we have a sort of a moveable kiosk, or sedan, with four posts bearing a canopy, and carried on men's shoulders on two poles. The body of the vehicle is a square wooden platform mounted on four short legs, and provided with rich cushions and pillows. It is used to this day on ceremonial occasions, and is known under the name of *Chaturdola.* It bears a close resemblance to the Sukhásana noticed in connexion with thrones, *(ante.* p. 250), and is in fact a variety of it.



No. 169

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Whip and goad.

The whip as delineated at Sánchí is a stiff leather thong attached to a short handle, very like the modern *koḍá*. It was called *kasá*, and under that name is frequently mentioned in ancient writings. For elephants the *ankus'a*, or a short staff mounted with an iron crook, was the only instrument in use for guiding them, and it remains unchanged to this day. The ankus'a shown in Woodcut No. 169, taken from the Sánchí bas-reliefs, differs in no respect from the instrument of that class now in use all over India.

The palankeen *(Siviká)* is frequently named in the great epics and other Sanskrit works; but it has not yet been met with in sculptures, and its ancient form, therefore, remains unknown. In its place we have a sort of a moveable kiosk, or sedan, with four posts bearing a canopy, and carried on men's shoulders on two poles. The body of the vehicle is a square wooden platform mounted on four short legs, and provided with rich cushions and pillows. It is used to this day on ceremonial occasions, and is known under the name of *Chaturdola.* It bears a close resemblance to the Sukhásana noticed in connexion with thrones, *(ante.* p. 250), and is in fact a variety of it.

Palankeens, &c.



No. 169

# VI.

# BEEF IN ANCIENT INDIA.

Modern Hindu repugnance to beef. Ancient feeling different. Wilson's notice. Mistaken notion about slaughtered animals having been revived. Notices in Uttararáma-charita, Mahávira-charita, Smritis, Manu, As'oka's edicts, Mahábhárata, Rámáyaṇa, Charaka, Sus'ruta, Kalpa and Grihya Sútras. Sacrifices noticed in the Black Yajur Veda. Panchasáradiya S'ava. S'úlagava Gavámayana. Atirátra rite. Nirudha-pas'ubandha. Distribution of the slaughtered meat. Pas'ukalpa. Dressing of the meat. Madhuparka rite; the necessity of eating beef on that occasion. Date of prohibition.

THE title of this paper will, doubtless, prove highly offensive to most of my countrymen; but the interest attached to the enquiry in connexion with the early social history of the Aryan race on this side of the Himálaya, will, I trust, plead my excuse. The idea of beef—the flesh of the earthly representative of the divine Bhagavatí—as an article of food is so shocking to the Hindus, that thousands over thousands of the more orthodox among them never repeat the counterpart of the word in their vernaculars, and many and dire have been the sanguinary conflicts which the shedding of the blood of cows has caused in this country. And yet it would seem that there was a time when not only no compunctious visitings of conscience had a place in the mind of the people in slaughtering cattle—when not only the meat of that animal was actually esteemed a valuable aliment—when not only was it a mark of generous hospitality, as among the ancient Jews, to slaughter the "fatted calf" in honor of respected guests,—but when a supply of beef was deemed an absolute necessity by pious Hindus in their journey from this to another world, and

a cow was invariably killed to be burnt with the dead.* To Englishmen, who are familiar with the present temper of the people on the subject, and to a great many of the natives themselves, this remark may appear quite startling; but the authorities on which it is founded are so authentic and incontrovertible that they cannot, for a moment, be gainsaid.

To the more learned among my countrymen the fact is not unknown that the Vedas, at one time, enjoined a ceremony called *Gomedha*, or the sacrifice of cattle; but they imagine it was typical, and did not involve the actual slaughter of the animal, and accordingly envelope it in mystery, so as to render it completely unintelligible to the uninitiated, or intelligible in a manner that takes them entirely away from the truth. When the subject attracted the attention of the late Professor Wilson, the attempt at mystification was so far successful that he was made to waver,† though the light of truth could not be altogether withheld from a scholar and critic like him. In a note in his translation of the *Meghadúta*, Professor Wilson said, "the sacrifice of the horse or of the cow, the *gomedha* or *as'vamedha*, appears to have been common in the earliest periods of the Hindu ritual. It has been conceived that the sacrifice was not real, but typical; and that the form of sacrificing only was performed upon the victim, after which it was set at liberty. The text of this passage, however, is unfavorable to such a notion, as the metamorphosis of the blood of the kine into a river certainly implies that blood was diffused. The expression of the original, literally rendered, is 'sprung from the blood of the daughters of Surabhi' that is, kine, Surabhi being

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* *Vide* the paper on the 'Funeral Ceremonies of the Ancient Hindus' in the next volume.

† This was, however, done at the early part of his Sanskrit studies, when he had not come to the fountain-head, and was obliged to depend on his pandits. Subsequently he had no doubt whatever on the subject. *Vide* his note to the *Uttara Rama Cheritra*, *Hindu Theatre*, I. 31

a celebrated cow produced at the churning of the ocean, and famed for granting to her votaries whatever they desired. 'Daughter of Surabhi' is an expression of common occurrence, to denote the cow."*

This argument of the learned Professor, however, had suggested itself to the people of this country long before his time, and it was met by some by the assertion that the word blood had been used only to complete the metaphor of the sacrifice. Others, more amenable to the plain meaning of the old texts, but at the same time more daring, assume that the animals so sacrificed were immediately after invariably revived by the supernatural powers of the sacrificers. Such a line of argument, however satisfactory to the pious proletariat, takes the question so entirely out of the domain of reason, that it may fairly be left to itself; but even the orthodox Hindu might fairly ask, how was it then that the venerable old poet and hermit Válmíki, when preparing to receive his brother sage Vas'ishṭha, the author of one of the original law books (Smṛitis) which regulates the religious life of the people, and a prominent character even in the Vedas, slaughtered a lot of calves expressly for the entertainment of his guests? The revivification in that case must have followed the consumption of the meat of the slaughtered animals by them. The passage in which Válmikí's preparation for the reception of Vas'ishṭha, described in the *Uttara-ráma-charita*, is so remarkable, that I need not offer any apology to quote it entire. The scene is laid in front of the hermitage of Válmíki, where two disciples of the sage discourse on the bustle within.

"*Bháṇḍáyana.* Behold, Saudhátaki, our humble dwelling!

Váḷmíki's holy hermitage assumes
The face of preparation; he expects

* Essays II., p. 353.

Unwonted guests to-day; the wild deer feed
Upon unusual fragments, and the air
Is filled with savoury odours.

*Saudhátaki.* There must be
Some wondrous cause, to make our grey beards lay
Their lectures by to-day.

*Bhán.* There is a cause,
And that of no mean import.

*San.* Tell me, I pray you,
What venerable ox may we expect
To visit us?

*Bhán.* For shame! refrain from jests:
The great Vas'ishtha hither brings the queens
Of Das'aratha, with Arundhatí,
From Rishyas'ringa to our master's dwelling.

*Sau.* Vas'ishtha is it?

*Bhán.* The same.

*Sau.* I crave his pardon. I had thought, at least,
It was a wolf or tiger we should look for.

*Bhán.* How so?

*Sau.* Why else was there provided
The fatted calf for his regale?

*Bhan.* Why, know you not,
The Vedas, which enshrine our holy law,
Direct the householder shall offer those
Who in the law are skilled, the honied meal
And with it flesh of ox, or calf, or goat,
And the like treatment shall the householder
Receive from Bráhmans learned in the Vedas.*"

Vasishṭha, in his turn, likewise, slaughtered the "fatted calf" when entertaining Vis'vámitra, Janaka, S'atánanda, Jáma-

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* Hindu Theatre I, 339. This rendering is a little too free, but the main facts remain unaltered. For a literal translation of the passage, see Mr. Tawney's version of the work, Act IV.

"the hedge-hog and porcupine, the lizard *godhá (guana)*, the *gaṇḍaka* (rhinoceros), the tortoise, and the *rabbit* or hare, wise legislators declare lawful food among five-toed animals, and all quadrupeds, camels excepted, which have but one row of teeth."* And this would include cows which were well known to him as animals having one row of teeth. Had he wished to exclude them, he would have for certain thought of them, and linked them with camels. It is, however, not necessary by such a line of argument, to infer what he intended, as he is quite explicit in his directions about the use of beef on the occasion of a Brahmachárí's return home. He says: "Being justly applauded for this strict performance of his duty, and having received from his *natural or spiritual* father, the sacred gift of the Vedas, let him sit on an elegant bed, decked with a garland of flowers, and let his father honour him, before his nuptials, with the present of a cow, according to the *Madhuparka* rite."† In a subsequent passage‡ he recommends the *Madhuparka* or the "honied meal" with beef for the reception of kings and other great dignitaries.

As'oka, who in his first edict, says "formerly in the great refectory and temple of the heaven-beloved king Piyadasi, daily were many hundred thousand animals sacrificed for the sake of meat food,"§ does not specify the kind of animals which were slaughtered, but, bearing in mind that when the animals were sacrificed he was a Hindu, and followed the ordinances of the S'ástra, it is to be presumed that he did not confine himself to the meat of kids and sheep.

The Mahábhárata and the Rámáyaṇa allude to the *go-vadha* or slaughter of cattle for sacrifice; but they do not afford any details, nor is it clearly mentioned that bovine meat was used as food.

* Manu, V, 18. † Ibid III, 3. ‡ Ibid. III, 119 seq.
§ Journal, Asiatic Soc., VII, p. 249.

into the religious life of ancient India, mention is made of scores of different ceremonies, which required the meat of cattle for their performance, and considerable stress is laid on the kind and character of the cattle which should be slaughtered for the supply of meat for the gratification of particular divinities. Thus, among the *Kámya Ishṭis*, or minor sacrifices with special prayers (B. III, c. VIII), we have to sacrifice a dwarf ox to Vishṇu ; a drooping-horned bull with a blaze on the forehead to Indra as the author of sacrifices or as the destroyer of Vitra ; a thick-legged cow *(Prishṇisaktha)* to the same as the regent of wind ; a white-blazed drooping-horned bull to the same, as the destroyer of enemies, or as the wielder of the thunderbolt ; a barren cow to Vishṇu and Varuṇa ; a cow that has lately miscarried to Aushadhayah ; a bull that has been already sanctified at a marriage or other ceremony to Indra and Agni ; a polled ox to Brahmaṇaspati ; a black cow to Pushan ; a cow that has brought forth only once to Váyu ; a brown ox to Indra, the invigorator of our faculties ; a speckled or piebald ox to Savitá ; a cow having two colors to Mitra and Varuṇa ; a red cow to Rudra ; a white barren cow to Súrya ; a white ox to Mitra ; a cow that has miscarried from taking the bull unseasonably to Váyu ; a cow fit to conceive to Bhaga, &c., &c. In a rule in connexion with the As'vamedha, the same authority lays down that sacrificial animals should differ in caste, colour, age, &c., according to the gods for whom they are designed.*

In the larger ceremonies, such as the Rájasúya, the Vájapeya, and the As'vamedha, the slaughter of cattle was an invariable accompaniment. Of the first two, the *Gosava* formed an integral part, and it ensured to the performer independent dominion in this world, and perfect freedom in the

* Taittiríya Bráhmaṇa, III, p. 658.

teen five-year-old, humpless, dwarf bulls, and as many dwarf heifers under three years. The former were duly consecrated, and then liberated, and the latter, after proper invocations and ceremonial observances, immolated; three on each day, the remaining two being added to the sacrifice on the last day, to celebrate the conclusion of the ceremony for the year. The Táṇḍya Bráhmana of the Sáma Veda notices this ceremony, but it recommends cattle of a different colour for each successive year. According to it the 7th or 8th of the waxing moon in Ás'vina for the first year, and the 6th of Kártika for the following years, were the most appropriate for it.* The origin of the *Yajna*, according to a Vedic legend, is due to Prajápati. Once on a time he wished to be rich in wealth and dependents; "he perceived the Panchas'áradíya; he seized it, and performed a sacrifice with it, and thereby became great in wealth and dependents." "Whoever wishes to be great," adds the Veda, "let him worship through the Panchas'áradíya. Thereby, verily, he will be great."† Elsewhere it is said that this ceremony ensures thoroughly independent dominion, and that a sage of the name of Kándama attained it through this means.‡

In the Ás'valáyana Sútra mention is made of several sacrifices of which the slaughter of cattle formed a part. One of them in the Grihya Sútra is worthy of special notice. It is called *Súlagava* or "spitted cow," *i. e.*, Roast Beef. It was performed either in the autumn *(sarat)*, or the spring season; when the moon was in the constellation Árdrá.§ The animal appropriate for it was a cow of other than fawn

* पञ्चवि० शरदि कार्त्तिके मासि यजेत। मध्यमाष्टम्यां वाश्वयुजीपक्षे स्व वत्सतरीरेवालभेरन् पष्ठौ विपृजेयुः। ६।११।

† Tait. Brahmana, II, 2.

‡ स्वाराज्यं वा एष यज्ञः। एतेन वा एकयावा काण्डमः स्वाराज्यमगच्छत्। स्वाराज्यं गच्छति। Taittiriya Bráhmana, II, 7, 5, 1.

§ शरदि वसन्ते वार्द्रया। ४, ८, २।

color, spotted with white,* and the choicest of the fold.† Black spots were, however, not deemed objectionable,‡ and a uniform black or blue color with a dash of red in it, *i. e.*, of a purplish tinge was reckoned unexceptionable.§ As soon as such an animal was selected, it was bathed with water in which paddy and barley had been steeped, and let loose,|| as long as it did not attain all its permanent teeth, being all the while kept dedicated to Rudra, by a Vedic mantra which says, "*May you thrive in the name of Rudra, the great god, &c.*"¶

The proper place for the sacrifice was an unfrequented spot, outside, and to the east, or the north, of a village, or town, whence the village was not visible, nor was it visible from the village. The time was after midnight, but some authorities preferred the dawn.**

All the necessary arrangements being complete, the priest, a Bráhmaṇ versed in the details of the sacrifice and experienced by former performance of it,†† should begin the ceremony by making certain offerings to the fire with appropriate mantras, and then plant a sacrificial post of the usual size, but of a green palás'a branch, uncarved and un-

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* अकुष्ठिपृषत् । ४; ८, ४ ।

† श्रेष्ठं स्वस्य यूथस्य । ४, ८, ३ ।

‡ कल्माषमित्येके । ४, ५ ।

§ कामं कृष्णमालोहवान्स्यात् । ४, ८, ६ ।

|| व्रीहियववतीभिरद्भिरभिषिच्य । ४, ६, ७ ।

¶ रुद्राय महादेवाय जुष्टो वर्द्धस्वेति । ४ ८, ८ ।

I am not sure whether the Rudra in this passage should be the noun, and Mahádeva "great god," adjective, or the latter the noun, and Rudra "fierce" the epithet. In the present day animal sacrifices are rarely offered to Mahádeva. To Sarasvatí, likewise, no meat offering is now made, though the Vedas enjoin it repeatedly.

** सधाखा ऊर्द्ध्वमर्द्धरात्रात् । उदित इत्येके । ४, ६, १२ ।

†† For obvious reasons this condition could not have been invariably carried out,

adorned, the practice in other ceremonies being to carve and decorate the post (Yúpa) very elaborately. Two pieces of string are now to be provided, one made of kús'a grass, and the other of a kind of creeping palás'a, *vratati*. One of these is tied round the post, and the other to the right horn of the victim, which is then attached to the post facing the west; each of these operations being performed while repeating a mantra. The animal being then immolated in the usual way, an offering is made to the fire with the liver held in a vessel made of palás'a wood or leaves. The mantra for the purpose is formed of the twelve names of S'iva thus—"To Hara, Mriḍha, S'arva, S'iva, Bhava, Mahádeva, Ugra, Bhíma, Pas'upati, Rudra, S'añkara, and Ís'ána, may this be welcome."* It is, however, optional with the priest to repeat the whole of this mantra, or only a part of it including the last six names, or simply to say "to Rudra, may this be welcome!" Offerings of cooked rice and other articles being now made, four bundles of kús'a grass are spread on the four sides of the altar, and a little cooked rice and some beef are offered to Rudra as the regent of the four quarters. This is followed by four mantras addressed to Rudra from the four quarters. The husks *(tusha)* and broken grain *(kunda)* of the rice used in cooking the rice offering, together with the tail, hide, tendons and hoofs of the victim are then to be thrown into the fire, and the effused blood, which at the time of immolation was held in a vessel, should be thrown on bundles of kús'a grass. At a time when the people knew not how to utilize bovine hair and hoofs, their burning was a matter of course, but the destruction of so useful an article as hide was not in keeping with the views of the Benthamites of the day; accordingly Sámbatya, a sage, recommended that it should be made subservient to human use, by

* हराय मृड़ाय शर्वाय शिवाय भवाय महादेवायोग्राय भीमाय पशुपतये रुद्राय शङ्करायेशानाय स्वाहा। ४, ८, १०।

moon is waxing in one of the Deva-nakshatras, or on the day when the moon is in the constellation Revatí, or on the day of the new moon. On the day preceding the ceremony, the performer should celebrate the s'ráditha called *Nándímukha*, and at night observe the *Udakas'ánti* and the *pratisara-bandha*. The first consist in sprinking holy water with appropriate mantras on the householder, and the latter in tying a thread on the right wrist in a prescribed form to serve as an emblem of engagement, to be kept on until the completion of the ceremony for which it is tied. In Bengal this thread is now tied only on the occasion of a marriage, or the investiture of the sacrificial thread; but in the North-West it is used for several other ceremonies.

On the day of the ceremony, the first duty is to attend to the five obligatory duties of bathing, offering of water to the manes, reading of the Vedas, offering of oblations to the household fire, giving of alms to beggars, and cooking of rice for the Vaisyadeváh.* The animal to be sacrificed is then to be thought of, while repeating the mantra beginning with the word *Príyatám*, &c. Proceeding then to the Gárhapatya fire, the institutor and his wife should sit beside it on kús'a grass, holding at the same time a bundle of that article in their hands, and then thrice inaudibly and thrice loudly repeat a mantra, and, having duly ordained the priests, solemnly resolve to perform the ceremony. The Adhvaryu should now come forward, produce in due form the sacrificial fire by briskly rubbing two pieces of wood against each other, sanctify it by proper mantras, light the Áhavínya fire altar, and thereon offer oblations of clarified butter. If the fire used be an ordinary one, and not produced by friction, a different form of sanctification is to be adopted to that recommended in the first instance. The oblations, however,

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* पाठो होमश्चातिथीनां सपर्य्या तर्पणं बलिः।
एते पञ्च महायज्ञाः ब्रह्मयज्ञादिनामकाः॥

are the same, and they are five-fold, the last two being in favor of the sacrificial post and the axe with which it is to be cut.

Now proceeding by the eastern gate of the town, the institutor should proceed to the tree from which the post is to be cut out. There, standing before the tree with his face to the west, he should address a mantra to the tree, and then anoint its trunk with a little sacrificial butter. The post being subsequently cut, a piece of gold is to be put on the stump, a little water is to be sprinkled thereon, and four offerings of butter made to it.

The post should be five *aratnis* and four fingers long, each *aratni* being equal to about 16 inches, that is, of the length of the forearm from the inner condyle of the humerous to the tip of the little finger. From nine inches to a foot of the lower end of the post should remain unshorn for the purpose of being buried in the earth; but above that the shaft should be pared and made either octagonal, or square. The top, to the extent of four fingers, should be cut into the form of a tenon, whereon is to be fixed a round wooden band or ferule, for regulating the proportion of which as also for the various operations of cutting, chiselling, scraping, appropriate mantras are provided. The shavings should be collected, partly for the cooking of frumenty, and partly for fixing the post in the earth.

The place where the post should be fixed has next to be determined. For this purpose, a peg is to be fixed in front of the Áhavaníya fire at the distance of two feet from its northern edge. Proceeding northwards twelve feet therefrom, a second peg is to be fixed, and then taking a piece of string 18 feet long and having a loop at each end, it is to be fixed to the fore peg, and then, drawing it tight at the thirteenth feet, a third peg is to be fixed, a hole being dug between it and the peg at the twelfth feet, and another at the four-

teenth feet. The string being now drawn towards the south, pegs are to be fixed as above. These opposite points are called the *s'roṇi*, or the hips of the altar. The string is next turned to the east and west successively, and pegs fixed at the distance of fourteen feet on each side from the centre. These constitute the two shoulders of the altar *(skandha)*. To the west of the twelfth foot pegs, eight inches of space should be kept for the post, and beyond it a peg should be fixed to mark the boundary of the spot. Beyond it, in a straight line at the distance of yoke-pin, another peg is to be fixed, and beyond it a square altar of the length and height of a yoke-pin should be made similar to the Áhavaníya altar. This is called the *Uttaravedi*. Upon this there should be another, a span square and four fingers or a span high, having a depression in the centre like a foot-mark. This is the northern navel, *Uttaranábhí*. Measuring two or three feet straight to the west of the altar pin, and then turning to the north two or three feet, a hole is to be dug of the size of a yoke-pin. This is called *Chátvála*. Measuring again four feet straight to the west of the altar, and then turning to the north one foot, a peg is to be fixed marking the place of the *Utkara* or refuge field.

The Yajamána now sheds his hair, rubs butter on his body, ornaments his eyes with collyrium, and then eats something, leaving the next operations of the ceremony to be performed by the priests.

The first duty of the Adhvaryu priest is now to cut two plaksha branches *(Ficus infectoria)*, and to arrange all the different articles required for the sacrifice, including among other things a peg of Gambhári wood *(Gmelina arborea)* of the length of the Yajamána's face, for driving it into the victim's chest. *(Kas'maryamayam hridaya-s'úlam yajamáná-mukha-sammitam.)* Now follows a series of offerings to the different sacred fires, and the repetition of a number of

mantras by the different priests, the Yajamána and his wife, which, however important in a ceremonical point of view, are neither likely to interest the public in the present day, nor to contribute to throw any light on the subject of this paper. I shall pass on, therefore, to the details connected with the treatment of the sacrificial animal.

On the conclusion of the different offerings above referred to, the victim should be brought forward, rubbed over with a paste of turmeric, emblic myrobolan and oil, well washed, and then led between the *Chátvála* and the *Utkara*, to a spot between the Ahavaníya fire and the sacrificial post and there made to stand before the latter, facing the west. The animal should be of the colour appropriate for Indra and Agni, for the whole ceremony is addressed to them. But should one of that colour be not available, any sound ox may be employed, provided it be not defective by reason of having only one horn, or bored ears, or broken teeth, or docked tail, or being dwarf, deaf, mangy, or undivided-hoofed.

After the bathing, the Adhvaryu should offer certain expiatory oblations with the *mitrájya, sthályájya*, and *vasáhomahavani*, in course of which he should invoke Agni, Indra, Váyu and Prajápati. Then taking a bit of kus'a grass he should place the same with the aid of the Yajamána, on the head of the victim between the horns, while repeating the first verse of the Yajur Veda, *Is'etvá*, &c. This is called *Upákarana* or emblematic sacrifice. It is to be followed by the repetition of certain mantras declaratory of the resolution to sacrifice the animal.

Other mantras now follow, accompanied with offerings to the different fires, and repeated manipulations of the sacrificial vessels. These done, the animal is tied by the right horn, the rope passing two or three times round the eye of that side, so as to leave the left horn free. A little water

is then sprinkled on the victim, which is allowed to have a good drink of water from a vessel brought near it for the purpose. An offering of butter to the fire with the *s'ruk* spoon is next made, and with the remainder of the sanctified butter in the spoon, spots are marked on the forehead, the hump, and the two hind quarters. Another series of mantras and offerings having been gone through by the Ádhvaryu, an axe is placed in the hands of the immolator, a spike stuck into the string with which the victim is tied, and the victim is anointed with some butter. These operations accomplished, the Agnidhra takes up a flaming brand from the *Áhavaníya* altar, and proceeding between the *Chátvála* and the *Utkara* to the front of the *Sámitra* fire, thrice circumambulates the victim by the right side with the brand in his hand; and then placing the brand near the *Áhavaníya* altar, repeats the circumambulation, while the Adhvaryu offers an oblation after every turn, and then continues his offerings to Prajápati Agni, Váyu, and Vis'vedeváh. The Pratiprasthátá now comes forward, and taking some burning charcoal from the *Gárhapatya* altar, removes it to the *Sámitra* altar. The victim is then led northward between the sacrificial post and the northern altar by the Agnidhra with a flaming brand in his hand, and the Adhvaryu and the Yajamána touch it with the vessel intended for holding the liver *(vapásrapaṇi).* The former next sanctifies the animal by a mantra, and the Agnidhra places before the immolator the burning brand which is cast aside by the Adhvaryu, who orders the immolation with an appropriate mantra ending with the word *sanjnapaya* "immolate." The immolator now casts the victim on spread kús'a grass so as to have it's head towards the west, and the feet pointing towards the north, and completes the slaughter, saying at the end "it is immolated" (sanjnapta). The institutor of the sacrifice and the priests should sit during the operation with their faces averted, so as not to behold the

sanguinary work, and the Adhvaryu should go on making expiatory offerings to obviate the evils likely to arise from the victim's lowing, or shivering, or attempting to run away, or dying by natural causes during the ceremony. A number of mantras, mostly from the Sañhitás of the Ṛig and the Yajur Vedas, are given for the various operations and offerings mentioned, as also for an interminable and unsufferably tedious series of offerings which are to follow the immolation; but it would be foreign to the subject of this paper, to describe them here. I must, therefore, refer the curious to the MS. from which these details have been taken.

That the animal slaughtered was intended for food is evident from the directions given in the Ás'valáyana Sútra to eat of the remains of the offering; but to remove all doubt on the subject I shall quote here a passage from the Taittiríya Bráhmaṇa, in which the mode of cutting up the victim after immolation is described in detail; it is scarcely to be supposed that the animal, would be so divided if there was no necessity for distribution. The passage runs thus: "celestial and human executioners, (Samitára) commence your work; carry the victim for the purpose of cutting it up. Anxious to divide the victim for the masters of the ceremony, collect the *ulmuka* fire for the animal brought here (to the shambles). Spread the kús'a grass; obtain the permission of the mother, of the father, of the uterine brother, of the friendly members, of the herd of the victim. Place it so that its feet may point towards the north; let the eyes reach the sun; let its vital airs attain the regent of the mind; let the ears attain the regents of the quarters; let its life reach the ether above; let its body abide on the earth. Separate its hide so that it may remain entire (without rents). Before cutting open the navel separate the fat. Close its breath that it may remain within; (*i. e.*, by tying up the mouth). Cut open its breast so as to make it appear like an eagle (with spread wings). Separate the fore-

arms; divide the arms into spokes; cut out the shoulders (clods) in the *form of a tortoise*; remove the hips (rumps) so as not to injure them; divide the thighs (rounds) with the bone entire in the shape of a door, or of the leaf of the oleander; separate *successively in order* the 26 ribs; divide the different members so that none be less than what it should be. Dig a trench for burying the excrements. Throw away the blood to the Rákshasas. Extract entire (and do not puncture in the middle) that part of the entrails which is like an owl in shape (the stomach, *vanishṭu*). Your offspring and their children will live in peace and never weep *(i. e.*, these operations being done according to the ordinances of the s'ástra, no injury will befall your family). O slayer of cattle, O Adhrigu, accomplish your task; *acomplish it according to rules*; O Adhrigu, accomplish it."*

The Taittiríya Bráhmaṇa is silent as to what should be done with these different parts, but the Gopatha Bráhmaṇa of the Atharva Veda supplies the omission. It gives in detail the names of the different individuals who are to receive shares of the meat for the parts they take in the ceremony. The total number of shares into which the car-

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* 'दैव्याः शमितार उत मनुष्या आरभध्वं। उपनयत मेध्या दुरः। आशासाना मेधपतिभ्यां मेधं। प्रास्मा अग्निं भरत। स्तृणीत बर्हिः। अन्वेनं माता मन्यतां। अनु पिता। अनु भ्राता सगर्भ्यः। अनु सखा सयूथ्यः। उदीचीनाऽ अस्य पदो निधत्तात्। सूर्य्यं चक्षुर्गमयतात्। वातं प्राणमन्ववसृजतात्। दिशः श्रोत्रं। अन्तरीक्षमसुं। पृथिवीऽ शरीरं। एकधास्य त्वचमाच्छ्यतात्। पुरा नाभ्या अपिशसो वपामुत्खिद-तात्। अन्तरेवोष्माणं वारयतात्। श्येनमस्य वक्षः कृणुतात्। प्रशसा बाहू। शला दोषणी। कश्यपेवांऽसा। अच्छिद्रे श्रोणी। कवषोरू स्रेकपर्णा-ष्ठीवन्ता। षड्विंशतिरस्य वङ्क्रयः। ता अनुष्ठ्योच्च्यावयतात्। गात्रं गात्र-मस्यानूनं कृणुतात्। ऊवध्यगोहं पार्थिवं खनतात्। अस्ना रक्षः सं-सृजतात्। वनिष्ठुमस्य माराविष्ट। उरूकं मन्यमानाः। नेद्वस्तोके तनये। रविता रवच्छमितारः। अध्रिगो शमीध्वं। सुशमि शमीध्वं। शमीध्व मध्रिगा" इति।

cass is to be divided is thirty-six, and the following persons are to receive one or more shares, each, *viz.*:—

"The Prastátá is to receive the two jaws along with the tongue; the Pratihartá, the neck and the hump; the Udgátá, the eagle-like wings or briskets; the Adhvaryu, the right side chine with the shoulder; the Upagátá, the left chine; the Pratiprasthátá, the left shoulder; the Brahmá and the wife of the Rathyá, the right rump; the Bráhmanáchchhaṅsi, the right hip lower down the round; the Potá, the thigh (leg?); the Hotá, the left rump, the Maitrávaruṇa, the left round; the Achchhávâka, the left leg; the Neshtá, the right arm (clod); the Sadasya, the left clod; the master of the house the sirloin and some part of the abdomen (flank? *sada* and *anuka)*; his wife, the loin or pelvic region, which she is to bestow on a Bráhman; the Agnidhra, the stomach (*vanishtu*), the heart, the kidneys, and the right fore leg (*váhu*): the Átreya, the left leg; the householder who ordains the sacrifice, the two right feet; the wife of the householder who ordains the sacrifice, the two left feet; and both of them in common, the upper lip; the Grávastut, three bones of the neck, (vertebra) and the *maniryá*, whatever that be; the man who leads the cow, three other vertebræ and a half of the perineum; the Chamasádhvaryu, the bladder; the Subráhmanya, the head; the man who invites people to a Soma sacrifice, the hide."* Diverse imprecations are hurled against those who

* अथातः सवनीयस्य पशोर्विभागं व्याख्यास्यामः। उद्धृत्यावदानानि, हनू सजिह्वे प्रस्तोतुः, कण्ठः सकाकुदः प्रतिहर्तुः, श्येनं वक्ष उद्गातुः, दक्षिणं पार्श्वं सांसमध्वर्योः, सव्यमुपगातॄणां सव्योऽंसः प्रतिप्रस्थातुः दक्षिणा श्रोणिरथ्या स्त्री ब्रह्मणः, अवरसक्थं ब्राह्मणाच्छंसिनः, ऊरु पोतुः, सव्या श्रोणिर्होतुः, अवरसक्थं मैत्रावरुणस्य, ऊरुरच्छावाकस्य, दक्षिणा दोर्नेष्टुः, सव्या सदस्यस्य, सदं चानूकञ्च गृहपतेः, जाघनी पत्न्याः, तां सा ब्राह्मणेन प्रतिग्राहयति, वनिष्ठुर्हृदयं वृक्कौ चाङ्गुल्यानि दक्षिणो बाहुरग्नीध्रस्य, सव्य आत्रेयस्य, दक्षिणौ पादौ गृहपतेर्व्रतप्रदस्य, सव्यौ पादौ गृहपतेर्भार्याया व्रतप्रदायाः, सहैवैनयोरोष्ठस्तं गृहपतिरेवानुशास्ति,

venture to depart from this order of distribution. Directions similar to these occur also in the Aitareya Bráhmaṇa.

The luckiest recipients were no doubt those who got the tongue, the hump, the rounds, and the sirloin; but some of the inferior officers, such as those who got the feet, the bladder, and the like, could have made but poor use of their shares. They were, however, all allowed plentiful libations of the Soma beer to wash down their shares of meat.

The general rules to be followed in slaughtering animals including cattle, are given by some of the Sútrakáras. They are of course liable to be modified by special rules in connexion with special ceremonies, but in the absence of any such special rule, they should be regularly followed. Ás'valáyana gives these rules under the head of *Pas'ukalpa,* in the eleventh section of the first book of his Gṛiyha Sútra. According to them, after offering oblations of clarified butter to the sacrificial fire, a hearth is to be made to the north of it, for the *Sámitra* or cooking fire. This done, the animal to be slaughtered is to be made to drink plentifully, then bathed, and then made to stand before the sacrificial fire, facing the west. After this two oblations of clarified butter are to be offered with the mantra beginning with the words *Dútam,* &c. The animal should then be touched on the back with a green branch bearing leaves, while announcing the resolution, "for the gratification of so and so (naming the god), I slaughter thee." A little water in which paddy and barley have been steeped, is now to be sprinkled on the forepart of the animal,

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मज्जानश्च स्कन्ध्यास्तिस्रश्च कीकसा ग्रावस्तुतः, तिस्रश्चैव कीकसा अर्द्धञ्चापानस्योन्नेतुः, अत ऊर्द्धं चमसाध्वर्य्यूणां, क्लोमाः शमयितुः, शिरः सुब्रह्मण्यस्य, यस्य सुत्यामाह्वयते, तस्य चर्म्म, तथा खलु षट्त्रिंशत्सम्पद्यन्ते। षट्त्रिंशदवदाना गौः, षट्त्रिंशदक्षरा बृहती, बार्हतो वै स्वर्गो लोकः, बृहत्या वै देवाः स्वर्गं लोके यजन्ते, बृहत्या स्वर्गे लोके प्रतिष्ठति, प्रतितिष्ठति प्रजया पशुभिर्य एवं विभजन्ते।

and the aforesaid resolution again repeated. This done, the animal is to be made to drink a part of that water, and the remainder of it is to be thrown on its right fore leg. It is then to be led round the fire three times silently without any mantra, and then carried to the north side, with a burning faggot held before it. When brought to the spot where the cooking hearth has been made, the faggot is to be put into the hearth, and a good fire kindled in it. The master of the ceremony then is to take up two stout sticks of Kás'marya* wood, one with, and the other without, leaves, and successively touch the animal and the Adhvaryu. This done, he should spread some kús'a grass on the west of the hearth, and the animal, having been laid on it with its head towards the east or the west, and the feet pointing towards the north, is to be killed by the Samitá. The instrument of destruction is not named, and it is doubtful whether a knife was used, or a spike of hard wood, one of the gambhári sticks alluded to above, was driven into the region of the heart to effect the destruction. Both methods are noticed elsewhere, and the spike was called *sphya*. But however effected, immediately after the immolation, the master of the ceremony should cover the right hypochondriac region with a little kús'a grass, and make an oblique incision to extract an important organ from the abdomen. If the immolation be made with the animal's head to the east, it will be necessary to turn the carcass over to come to the spot. The organ to be extracted is called *Vapá*, and in Sanskrit dictionaries it is set down as a synonym of fat or marrow. Some take it to be the omentum, but the commentator of Ás'valáyana

* *Gmelina arborea.* The wood of this tree is reputed to be remarkably dense, hard and tough. The technical name of the stick is *Vapás'rapaní.* A s'rapaní is ordinarily a cooking pot, but in the present instance, as one of them should be अपत्रा "without leaves" and the other सपत्रा with leaves, I infer that sticks are meant.

describes its place to be a hollow above, and to the right of the navel,* which takes us exactly to the region of the liver, and knowing how eagerly such Hindus as take flesh-meat in the present day, like the liver of goats, as a delicacy, I am disposed to believe that the word means the liver. Such a titbit would be much more worthy of the gods than the skinny omentum, which is almost unfit for human food.

The liver being thus extracted, it should be cut, stuck on the two gambhárí sticks, washed, and then heated on the cooking fire. Proceeding then to the sacrificial fire, an offering is to be made to it with a bit of the liver. Sitting then on the south side of that fire, the meat is to be cooked, and butter be dropped on it while cooking. The roast being in this way completely dressed, it should be placed on the leaves of the plaksha tree *(Ficus infectoria)*, and further offerings made to the two fires. On this occasion rice is likewise cooked, and the carcass being then cut up into eleven principal parts, such as the heart, the tongue, the briskets, &c., besides other minor parts, they are all to be cooked at the

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* शामित्रस्य पश्चिमे देशे वर्हिरुपस्तृणाति कर्त्ता। 'तं यत्र निहनिष्यन्तो भवन्ति तदध्वर्य्युर्वर्हिरधस्तादुपास्यति' इति श्रुतेः। ततस्तस्मिन् वर्हिषि प्राक्शिरसं प्रत्यक्शिरसं वोदक्पादं पशुं संज्ञपयति शमिता। उदक्पादमित्येव सिद्धे प्राक्शिरसं प्रत्यक्शिरसं वेति वचनम्, ऊर्द्ध्वशिरसः संज्ञपनं माभूदित्येवमर्थं। ततः कर्त्ता पुरा नाभेरवाङ् नाभेर्दक्षिणतो नाभेरासीनो वपास्थानं ज्ञात्वा तत्र त्वचमन्तर्द्धाय तिर्य्यक् छित्वा वपामुत्खिदेदुद्धरेत्। वपास्थानन्तु दक्षिणस्य पार्श्वस्य विविक्तप्रदेशः। यदि प्राक्शिराः संज्ञप्तः, तथा सति दक्षिणं पार्श्वमुत्तानं कृत्वा त्वगान्तर्द्धानादि कुर्य्यात्। ततो वपामवदाय अवखण्ड्य। पुनर्वपाग्रहणं कृत्स्नावदानार्थं। तेनान्येष्ववदानेष्वकृत्स्नानि ग्रहणानि भवन्ति। ततो वपाश्रपणीभ्यां परिगृह्याद्भिरभिषिच्य प्रक्षाल्य शामित्रे प्रताप्य, प्रतापनन्तु धर्म्ममात्रं श्रपणस्योत्तरत्र विधानात्। ततः शामित्रस्योत्तरतो गत्वाऽग्रेणैनमौपासनमग्निं वपां हृत्वाऽस्य दक्षिणत आसीनः श्रपयित्वा श्रपयिता तां वपामभिघार्य्य वर्हिषि प्लक्षशाखासु निधाय उभावप्यग्नी यथागतं परीत्य जुहुयात् अग्नये स्वाहेति।

sámitra fire. The heart is to be stuck on a spit and carefully roasted over the fire so as to make it tender, clarified butter being subsequently poured on it to complete the dressing.* On the completion of the operation, the different kinds of cooked meat and rice should be offered to the sacrificial fire with appropriate mantras, each ending with the word *svdhdh.* If the meat and rice be offered separately, then separate *swishtakrit* or final offerings are to be made for each of them, otherwise one final-offering would suffice for all. The roast should be offered last without any mantra. The mantras enjoined are all extracts from the Sañhitá of the Rig Veda.

These rules, simple as they are, are, nevertheless, too complicated for a feast to be improvised whenever a respectable guest honours a house; and for such a purpose, therefore, a separate set of rules have been provided, in which the order of the guest to slaughter, given in a Rig Vedic verse, followed by another when immolating, is held sufficient. The ceremony is called *Madhuparka*, or the offering of "honied meal." The persons for whom this ceremony was imperative, were ritvigs, kings, bridegrooms, Vedic students on their return home after the completion of their studies, Ácháryas or tutors coming to a house after a year's absence, fathers-in-law, uncles, and generally all men of high rank.† The first duty of the householder, on the arrival of a guest belonging to any of these classes, was, after salutation, to offer a seat.

* पशोर्यैकर्यं, यानि त्रेतायामेकादशावदानानि पशोः प्रसिद्धानि, तानि यदा स्विष्टकृदर्थं। हृदयं जिह्वा वक्ष इत्येवमादीनि। सर्वाङ्गपञ्च-पञ्चैकादशभ्योऽन्यान्यपि यान्यङ्गानि दृष्टानि तेषामपि विकल्पेन पञ्चपार्थं। एवमवदाय तानि शामित्रः श्रपयति। हृदयं शूले प्रोत्य प्रतापयति यथा शृतं भवति। ततः शृतान्यभिघार्योद्वास्य ततः स्थालीपाकस्यैकदेशं पूर्वं जुहुयात्, ततोऽवदानानि ॥ १२ ॥

† ऋत्विगाचार्य श्वशुर-पितृव्य-मातुलादीनामुपस्थाने मधुपर्कः, संवत्सरे पुनर्दत्तविवाहादीरम्भोग राज्ञः श्रोत्रियस्य च ॥ १२० ॥ Gautama &c. Kulluka Bhatta; Manu, III, 120.

This was ordinarily a mat made of kús'a* grass, and in the case of ṛitvigs or officiating priests, it was the most appropriate; but the word used for it by Ás'valáyana is *vishṭara*, which means bedding, or an article to sit upon, and it may have been a carpet, a stool, a chair, or a couch. Wooden seats are particularly mentioned in different works.

After the guest was seated, the most appropriate article for refreshing him, in a warm country like India, was water to wash his feet with. This was called *pádya*; and the rule on the subject required that a Bráhmaṇa guest should have his right foot washed first, and then the left, the order being reversed in the case of S'údras; the Kshatríyas and Vaisyas being left to follow their own inclination in the matter. The washing was repeated three times. The next offering was the *arghya*, which consisted of a little water with scents and flower garlands,† and was no doubt much more appropriate than what is offered to gods in the present day, which consists of sandal wood paste and a few grains of rice thrown on a flower and sprinkled over with water. The mantra for the offering was repeated three times. A glass of water for washing the face next followed, and the guest was expected to drink of it as much as he liked. The *Madhuparka* strictly so called was next brought forward. It consisted of curds and honey held in a small cup, butter being substituted when honey was not at hand. When bringing it, the host was required to look at it, and repeat a mantra three times. The guest received the cup while repeating a mantra, then looked at it while repeating another, and mixing the ingredients in the cup with his index finger or the thumb or the little finger with a third, and cleared his finger by giving it a jerk while repeating a fourth mantra. He was required then to repeat

* कूर्चैर्दर्भैर्विनिर्म्मितं ।

† गन्धमाल्यादिसंयुक्तमुदकमुच्यते । Garganáráyaṇa's Vṛitti on A's'valáyana, 105.

three mantras successively, throwing a little of the mixture after each repetition upwards into the air with the tip of his finger, offering it to Rudra, Áditya, and Vis'vedeváh. Then placing the cup on the ground, he tasted the mixture three times, repeating a mantra on each occasion. According to some, he had to eat the whole of the mixture in three mouths-ful, but according to others, a portion was left behind to be given to a Bráhmaṇ, or should such a person to receive it happen not to be at hand, to be thrown into water.* A drink of water after this honeyed meal was of course a necessity, which was met in the same way as the first drink before the meal, the mantra for it being the same; but a second drink followed with a different mantra. The order to give the remains of a tasted food to a Bráhman is worthy of note. It would be the direst insult to a Bráhmaṇ in the present day to ask him to receive such an offering.

A cow was next brought forward and offered to the guest; whereupon he said, "My sin is destroyed, destroyed is my sin," and then ordered the immolation of the animal with the words *Om kuru*, "accomplish, Amen"† The host thereupon immolated the cow in the name of some appropriate divinity. If it were desired that the cow should be sanctified and let loose, then the guest repeated the mantra: "This cow is the mother of the Rudras, and the daughter of the Vasus, the sister of the Ádityas, and the pivot of our happiness; therefore I solemnly say unto all wise men, kill not this harmless sacred cow. Let her drink water and eat

* ब्राह्मणाय उच्छिष्टं बहुभ्यस्तयानं एकदेशं मधुपर्कं प्रदद्यात्, ब्राह्मणाभावे अप्सु निषिञ्चेत ॥ १८ ॥

† आचान्तोदकाय गां वेदयन्ते ॥ २२ ॥

हतो मे पाप्मा पाप्मा मे हत इति जपित्वा ओं कुरुतेति कारयि- ष्यन् ॥ २४ ॥

इमं मन्त्रं जपित्वा ओं उत्सृजतेति ब्रूयात् । यदि कारयिष्यन् मारयि- ष्यन् भवति तदा च दाता आलभेत । तत्र देवताः प्राकृताः ॥ २६ ॥

This was ordinarily a mat made of kús'a* grass, and in the case of ṛitvigs or officiating priests, it was the most appropriate; but the word used for it by Ás'valáyana is *vishṭara*, which means bedding, or an article to sit upon, and it may have been a carpet, a stool, a chair, or a couch. Wooden seats are particularly mentioned in different works.

After the guest was seated, the most appropriate article for refreshing him, in a warm country like India, was water to wash his feet with. This was called *pádya*; and the rule on the subject required that a Bráhmaṇa guest should have his right foot washed first, and then the left, the order being reversed in the case of S'údras; the Kshatríyas and Vaisyas being left to follow their own inclination in the matter. The washing was repeated three times. The next offering was the *arghya*, which consisted of a little water with scents and flower garlands,† and was no doubt much more appropriate than what is offered to gods in the present day, which consists of sandal wood paste and a few grains of rice thrown on a flower and sprinkled over with water. The mantra for the offering was repeated three times. A glass of water for washing the face next followed, and the guest was expected to drink of it as much as he liked. The *Madhuparka* strictly so called was next brought forward. It consisted of curds and honey held in a small cup, butter being substituted when honey was not at hand. When bringing it, the host was required to look at it, and repeat a mantra three times. The guest received the cup while repeating a mantra, then looked at it while repeating another, and mixing the ingredients in the cup with his index finger or the thumb or the little finger with a third, and cleared his finger by giving it a jerk while repeating a fourth mantra. He was required then to repeat

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* कूर्च्चैर्दर्भैर्विनिर्म्मितं।

† गन्धमाल्यादिसंयुक्तमुदकमुच्यते। Garganáráyaṇa's Vṛitti on A's'valáyana, 105.

three mantras successively, throwing a little of the mixture after each repetition upwards into the air with the tip of his finger, offering it to Rudra, Áditya, and Vis'vedeváh. Then placing the cup on the ground, he tasted the mixture three times, repeating a mantra on each occasion. According to some, he had to eat the whole of the mixture in three mouths-ful, but according to others, a portion was left behind to be given to a Bráhmaṇ, or should such a person to receive it happen not to be at hand, to be thrown into water.* A drink of water after this honeyed meal was of course a necessity, which was met in the same way as the first drink before the meal, the mantra for it being the same; but a second drink followed with a different mantra. The order to give the remains of a tasted food to a Bráhmaṇ is worthy of note. It would be the direst insult to a Bráhman in the present day to ask him to receive such an offering.

A cow was next brought forward and offered to the guest; whereupon he said, "My sin is destroyed, destroyed is my sin," and then ordered the immolation of the animal with the words *Om kuru*, "accomplish, Amen."† The host thereupon immolated the cow in the name of some appropriate divinity. If it were desired that the cow should be sanctified and let loose, then the guest repeated the mantra: "This cow is the mother of the Rudras, and the daughter of the Vasus, the sister of the Ádityas, and the pivot of our happiness; therefore I solemnly say unto all wise men, kill not this harmless sacred cow. Let her drink water and eat

* ब्राह्मणाय उच्छिष्टं प्रदद्यादशनाद उदङ्मुखो मधुपर्कं प्रयच्छेत्, ब्राह्मणाभावे अप्सु निक्षिपेत् ॥ १८ ॥

† आचान्तोदकाय गां वेदयन्ते ॥ २२ ॥

हतो मे पाप्मा पाप्मा मे हत इति जपित्वा ओंकुरुतेति कारयि-ष्यन् ॥ २४ ॥

इमं मन्त्रं जपित्वा ओंकुरुतेति ब्रूयात् । यदि कारयिष्यन् मारयि-ष्यन् भवति तदा च दाता आलभेत । तत्र देवताः प्रागुक्ताः ॥ २५ ॥

grass."* He then ordered it to be let loose, and the same was accordingly done. Lest this should lead to the idea that the feast at this ceremony may be celebrated without flesh-meat, Ás'valáyana emphatically ordains that no *Madhuparka* should be celebrated without flesh-meat,† and his commentator Garganáráyaṇa provides for this by saying that "when the animal is sacrificed, its meat supplies the requirement of the feast; should it be let loose, flesh-meat should be provided by other means, but on no account should the feast be without that article."‡

In this he has followed the ordinance of Manu, who declares that the man who, having in due form performed a (Madhuparka or other) ceremony, fails to eat flesh-meat, will be doomed to be born an animal for twenty-one generations;§ and that Brahmá having created animals for sacrifices, their immolation at a Vedic ceremonial cannot be injurious, and that animals, beasts, trees, tortoises, and birds, destroyed in the performance of sacred rites, rise after death in the scale of creation.||

Convenient as the ceremony of Madhuparka was for the celebration of a feast, it was not calculated to afford a ready and cheap supply of meat to persons given to its use, and accordingly Manu ordained (ante. p. 361,) that flesh-meat

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* माता रुद्राणां दुहिता वसूनां स्वसाऽऽदित्यानाममृतस्य नाभिः। प्रणु वोचं चिकितुषे जनाय मा गामनागामदितिं वधिष्ट। पिबतूदकं तृणान्यत्तु। ओमुत्सृजत।

This mantra occurs in the ceremony of letting loose the cow which used to be led before a corpse to the burning ground at a funeral. Vide 'Article on the Funeral Ceremony of the Hindus,' further on.

† नामांसो मधुपर्को भवति भवति ॥ २६ ॥

‡ मधुपर्काङ्गभोजनममांसं न भवतीत्यर्थः। कुतः मांसस्य भोजनाङ्गत्वेन लोके प्रसिद्धत्वात्। अनेनाभ्युपायेन भोजनमप्यत्र विहितं भवति। पशुकरणपक्षे तन्मांसेन भोजनं, उत्सर्जनपक्षे मांसान्तरेण। A's'valáyana I, 24-26.

§ Manu V. 35. || Ibid V. 394.

purchased at a butcher's stall was pure, and fit for consumption by pious Hindus. I have nowhere noticed that butchers were required, as among the Muhammadans, to observe any ceremonial rite before slaughtering animals, and am disposed to believe that none was observed, and that the only restriction was that the person purchasing meat for food had to offer a portion of it, after dressing it, to the gods, manes, guests, or beggars, which sufficed to accomplish a *yajna.*

It is worthy of note here, that while killing of Bráhmans, drinking of spirituous liquors by Bráhmans, stealing of gold belonging to Bráhmans, defilement of the bed of spiritual preceptors, and association for a year with those who are guilty of the aforesaid four crimes, are reckoned by Yájnavalkya among the most heinous crimes—*Mahápátaka,* the mischievous killing of cattle is included among secondary or *upapátaka* offences, and the expiation for it is comparatively slight. A Bráhman guilty of drinking spirits cannot expiate his crime without suicide produced by a draft of molten metal, while a cow-killer is let off by Samvarta with a fortnight's short-commons, consisting of barley-meal, milk, curds and butter, a feast to Bráhmans, and the gift of a cow.* Yájnavalkya is a little more exacting; he insists upon drinking of the five products of the cow, *panchagavya,* following a cow as it roams about, sleeping in a cattle-shed regularly for a whole month, and ending with the gift of a cow, or a fine equal to the value of the animal destroyed.† He also recommends other forms of expiation, and his rival Smritikáras have each his own scheme; but none insists upon any thing approaching suicide.

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* सक्तुयावकभैक्षाशी पयोदधिघृतं सकृत्।
एतानि क्रमशोऽश्नीयान्मासार्द्धं सुसमाहितः।
ब्राह्मणान् भोजयित्वा तु गां दद्याद्गोवधशुद्धये। संवर्त्तः।
पञ्चगव्यं पिबन् गोघ्नो मासमासीत संयतः।
गोष्ठेशयो गोऽनुगामी गोप्रदानेन शुध्यति। याज्ञवल्क्यः।

The author of the *Nárasiñhíya Prayoga-párijáta* has copied verbatim As'valáyana's rule about the necessity of eating beef at the Madhuparka ceremony, but qualified it by a quotation from the Áditya Puráṇa which says that in the present Kali age the Madhuparka should be celebrated without slaughtering a cow. This quotation has been given at length by Parásara*, Hemádri and other compilers, and runs as follows:—"Protracted Brahmacharya, carrying of the begging pot called Kamaṇḍalu, production of issue by a brother-in-law, gift of a daughter once already given away (widow marriage), marriage with girls of other than one's own caste by the twice-born classes, killing of noble Bráhmaṇs (versed in the Vedas) in fair warfare even if they come to the attack, entrance into the Vánaprastha state according to law, reduction of the period of mourning on account of duty, or service, or for reading the Vedas; expiations on the part of Bráhmaṇs involving loss of life; condemnation for association with criminals; immolation of animals at the Madhuparka; acceptance as sons, of other than legitimate and adopted sons; boarding together on the part of the twice-born householders with a servant, cowherd, friend of the family, and persons with whom agriculture is jointly carried on if they be S'udras by caste; pilgrimage to very remote places; cooking of food by S'udras for Bráhmaṇs; expiatory suicide by falling from very high places, or into the fire; suicide on account of extreme old age, and the like have been abstained from by noble and learned men at the beginning of the Kali Yuga for the well-being of mankind. The practice of revered persons is proof as potent as that of the Vedas."†

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* I suppose this is a compiler and not the author of the Sañhitá, for the latter does not quote authorities in support of his rules and ordinances.

† हेमाद्रिपराशरयोरादित्यपुराणम् ।
दीर्घकालं ब्रह्मचर्यं धारणञ्च कमण्डलोः ।
देवरेण सुतोत्पत्तिर्दत्तकन्या प्रदीयते ॥

The Vrihannáradíya Puráṇa follows the above very closely, but at the same time it omits some acts and prohibits others which are not condemned by the former. The additional acts condemned are, suicide by getting one's self drowned in the sea, offering of flesh meat at S'ráddhas, human sacrifice, horse sacrifice, Gomedha sacrifice, and Vedic yajnas involving sacrifices of cattle.* It is worthy of note, however, that this prohibition in the Áditya Purána is not positive and explicit, but implied : "Because certain noble and wise men did not do so, and the practice of pious men is proof as potent as that of the Vedas," ergo they should not be done, the author

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कन्यानामसवर्णानां विवाहश्च द्विजातिभिः।
आततायिद्विजाग्र्याणां धर्म्मयुद्धेन हिंसनं।
वानप्रस्थाश्रमस्यापि प्रवेशो विधिचोदितः॥
वृत्तस्वाध्यायसापेक्षमघसङ्कोचनं तथा।
प्रायश्चित्तविधानञ्च विप्राणां मरणान्तिकं॥
संसर्गदोषः पापेषु मधुपर्के पशोर्वधः।
दत्तौरसेतरेषान्तु पुत्रत्वेन परिग्रहः॥
शूद्रेषु दासगोपालकुलमित्रार्द्धसीरिणां।
भोज्यान्नता गृहस्थस्य तीर्थसेवातिदूरतः॥
ब्राह्मणादिषु शूद्रस्य पक्वतादिक्रियापि च।
भृग्वग्निपतनैश्चैव वृद्धादिमरणन्तथा॥
इत्यादीनभिधाय।
एतानि लोकगुप्त्यर्थं कलेरादौ महात्मभिः।
निवर्त्तितानि कर्म्माणि व्यवस्थापूर्व्वकं बुधैः।
समयश्चापि साधूनां प्रमाणं वेदवद्भवेत्॥

* बृहन्नारदीये। समुद्रयातुः स्वीकारः कमण्डलुविधारणम्।
द्विजानामसवर्णासु कन्यासूपयमस्तथा॥
देवराच्च सुतोत्पत्तिर्मधुपर्के पशोर्वधः।
मांसादनं तथा श्राद्धे वानप्रस्थाश्रमस्तथा॥
दत्तायाश्चैव कन्यायाः पुनर्दानं परस्य च।
दीर्घकालं ब्रह्मचर्य्यं नरमेधाश्वमेधकौ॥
महाप्रस्थानगमनं गोमेधं च तथा मखं।
इमान् धर्म्मान् कलियुगे वर्ज्यानाहुर्मनीषिणः।

wished to say, but did not do so in so many words. Both these extracts proceed from Upapuráṇas of probably not more than eleven or twelve hundred years of age. According to Professor Wilson, the Upapuráṇas are not older than the twelfth century, but seeing that the Vrihannáradíya has been quoted as an authority by Vallála Sena in his Dánas'ágara, and he lived in the eleventh century, it must be at least four or five centuries older; but they have been so carelessly preserved, and are so full of interpolations, and altogether are of such questionable authenticity, that even the most orthodox Hindu holds them to be of very secondary rank compared to the Vedas, the Smṛitis and the Sútras. Thus it is said in the *Prayoga-párijáta* that where the S'ruti and the Smṛiti disagree, the S'ruti should prevail. Again the Smṛitis are more venerable than the Puráṇas, and of the Smṛitis Manu is the most authoritative.*

In the opinion of Paulastya, who is himself an original Smṛitikára, Manu must yield to the Kalpa Sútras, which, being derived immediately from the Vedas, are of greater authority than the Smṛitis.† This has not been contradicted by any lawgiver or commentator. The Upapuráṇas hold a lower rank than the Puráṇas, and have nowhere been allowed to override the latter, much less the S'ruti and the Smṛiti; the order of precedence being, according to the above, 1st S'ruti or Veda, 2nd Sútra, 3rd Smṛiti, 4th Puráṇas, 5th Upapuráṇa. It is not a little remarkable, therefore, the last should be allowed in the present instance to prevail over the first four. The author of the *Nirṇaya-sindhu* assumes even a lower

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* श्रुतिस्मृतिपुराणानां विरोधो यत्र विद्यते ।
तत्र श्रौतं प्रमाणन्तु तयोर्द्वैधे स्मृतिर्वरा ॥
वेदार्थोपनिबन्धृत्वात् प्राधान्यं हि मनोः स्मृतम् ।
मन्वर्थविपरीता या सा स्मृतिरप्रशस्यते ॥

† कल्पसूत्रस्मृत्योर्विरोधे प्रत्यक्षश्रुतिमूलत्वेन कल्पसूत्रं प्रबलमित्याह हेमाद्रौ संग्रहे पौलस्त्यः ।

ground. He begins by quoting an unnamed authority which says, "Works which lead not to paradise, and are condemned by public opinion, should not be performed;" and then argues, "Thus, the slaughter of large bulls and large sheep for Bráhmaṇas versed in the Vedas, though duly ordained, should not be done, being detested by the public. Further, the rule, let a cow fit for offering to Mitra and Varuṇa, or a barren cow, or one that has ceased to bear after first calving, be sacrificed, is duly ordained; still such sacrifice being opposed to public feeling, should not be performed."* If such be the case, the question arises, whence comes this public feeling against the ordinances of the Vedas? And we can nowhere meet with a more appropriate reply than in the fact that when the Bráhmans had to contend against Buddhism, which emphatically and so successfully denounced all sacrifices, they found the doctrine of respect for animal life too strong and too popular to be overcome, and therefore gradually and imperceptibly adopted it in such a manner as to make it appear a part of their S'ástra. They gave prominence to such passages as preached benevolence and mercy for all animated creation, and so removed to the background the sacrificial ordinances as to put them entirely out of sight. Such a process is even now going on in Hinduism

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* अस्वर्ग्यं लोकविद्विष्टं धर्म्यमप्याचरेन्न तु इति निषेधात्। यथा, महोक्षं वा महाजं वा श्रोत्रियाय प्रकल्पयेदिति विधानेऽपि लोकविद्विष्टत्वादननुष्ठानं। यथा वा मैत्रावरुणीं गां वशामनुबन्ध्यामालभेत इति गवालम्भनविधानेऽपि लोकविद्विष्टत्वादननुष्ठानं।

निर्णयसिन्धुः।

यदाह बृहस्पतिः। उक्तो नियोगो मनुना निषिद्धः स्वयमेव तु।
युगह्रासादशक्योऽयं कर्तुमन्यैर्विधानतः॥
तपो ज्ञानसमायुक्ताः कृते त्रेतायुगे नराः।
द्वापरे च कलौ नॄणां शक्तिहानिर्हि निर्मिता॥
अनेकधा कृताः पुत्रा ऋषिभिर्यैः पुरातनैः।
न शक्यन्तेऽधुना कर्तुं शक्तिहीनैरिदं जनैः॥

under the influence of Christianity, and, as the Hindu mind was during the ascendancy of Buddhism already well prepared for a change by the teachings of the Buddhist missionaries, no difficulty was met with in making faith, devotion, and love supply the place of the holocausts and unlimited meat offerings ordained by the Vedas. The abstention was at first, no doubt, optional, but gradually it became general, partly from a natural disposition to benevolence, and partly out of respect for the feeling of Buddhist neighbours, such as the Muhammadans now evince for their Hindu fellow-subjects by abstaining from beef in different parts of Bengal, that writers found it easy to appeal to the practice of the people and public feeling as proofs even as potent as the Vedas, and authoritatively to declare that sacrifices were forbidden in the present age. This once done, the change was complete. In short, the Buddhist appeal to humanity proved too much for the Smṛiti, and custom has now given a rigidity to the horror against the sacrifice of animal life which even the Vedas fail to overcome.

# VII.
# SPIRITUOUS DRINKS IN ANCIENT INDIA.

Denunciations against spirituous drinks. Craving for them universal. Muhammadan addiction to them. Ancient Indo-Aryans' attachment to them. Prohibition by S'ukra A'chárya. Do. by Krishna. Do. in the Smritis. Expiations. Failure of prohibitions. Notices of the use of spirituous liquors in the Rámáyana, in the Mahábhárata, in Buddhist works, in the works of Kálidása, and Mágha, in the Puránas and the Tantras. Drinking Circles. Rules for drinking. Injunctions to drink, in the Matrikabheda Tantra and the Kámákhyá Tantra. Different kinds of spirituous liquors. Arrack of the Vedas. Aniseed liquor. Jujube liquor. Rum greatly condemned. Seasons appropriate for particular kinds of liquor. Foreign wines. Mode of drinking. Wine-glasses. Diseases resulting from drink. Fermented beverages. Soma beer.

SAGES and moralists have, in all ages and in every clime, expatiated in strong terms on the impropriety of indulgence in spirituous drinks, and some physiologists have recently discovered that such drinks do not possess any of the virtues which tradition has all along ascribed to them. We are told that they do not add to our strength, or power of digestion; they have no influence on the heart's action; they are powerless to increase the temperature of the body; they cannot help us to resist the chilling effect of cold; and are inert as aliments, failing alike in affording fuel for the lungs and material for the formation of the tissues. But neither the anathema of sages and moralists, nor the dicta of the professors of science, have anywhere sufficed to suppress their use. They prevail in some form or other in almost every part of the world; and those primitive races which have no knowledge of them, seize them with the greatest avidity the moment they find them; for, like tobacco, spirituous drinks have a peculiar charm

which enables them, if not to defy, at least to hold their own alike against the deductions of science and the mandates of religion. In the eye of reason, voluntary inebriation may appear in the most offensive light; but there seems to be a craving in human nature to elevate the spirit above the dull routine of every-day existence, and to produce a temporary exhilaration during which the cares and troubles of life are forgotten, and trains of delightful ideas fill the mind, which nothing can completely eradicate.

The history of Muhammadan civilization affords a most striking illustration of the truth of this assertion. None condemned the use of wine more emphatically than the Prophet of Arabia, and yet there is no Muhammadan country where the consumption of wine is other than considerable; or, as the great historian, Gibbon, has aptly expressed it, "the wines of Shiráz have always prevailed over the laws of Muhammad."

The annals of the Indo-Aryans yield a no less remarkable illustration. The earliest Bráhmaṇ settlers were a spirit-drinking race, and indulged largely both in Soma beer and strong spirits. To their gods the most acceptable and grateful offering was Soma beer, and wine or spirit (for in connexion with India the two words may be used synonymously, there never having been any such thing as pure wine,) was publicly sold in shops for the use of the community. In the Ṛig Veda Sañhitá a hymn occurs which shows that wine was kept in leather bottles,* and freely sold to all comers. The said wine was, likewise, offered to the gods, and the *Sautrámaṇi* and the *Vájapaya* rites, of which libations of strong arrack formed a prominent feature, were held in the highest esteem. Doubts have been entertained as to the nature of the Soma beverage, and people are not wanting

* "I deposit the poison in the solar orb, like a leather bottle in the house of a vendor of spirits." Wilson's Ṛig Veda, II, p. 204.

who repudiate its intoxicating nature; but none will venture to deny that the *surá* of the *Sautrámaṇi* and the *Vájapaya* was other than arrack manufactured from rice-meal, and that will suffice to show that the Vedic Hindus did countenance the use of spirit. As to the Soma, if any reliance is to be placed in the directions given for its preparation, and on the Vedic descriptions of its effect on the gods, it is impossible to take it to have been other than a fermented intoxicating beverage. Of this, however, I shall treat lower down.

In the hot plains of India, over-indulgence in spirituous drinks, however, gradually, bore its evil consequences, and among the thoughtful a revulsion of feeling was the result. The later Vedas accordingly proposed a compromise, and, leaving the rites intact, prohibited the use of spirit for the gratification of the senses, in language very similar to Elihu Burrit's "Touch not, taste not, smell not, drink not," saying "Wine is unfit to be drunk, unfit to be given, and unfit to be accepted."* They denounced drinking to be heinous in the last degree, quite as bad as the murder of a Bráhman. The Smritis, following in their wake, included the sin of wine-bibbing among the five capital crimes or *mahápátakas*, and ordained the severest punishment against the offender.

It is said that the prohibition was first promulgated by S'ukra Áchárya, the high priest of the Asuras, who was disgusted by the remembrance of certain excesses to which he himself had been led by over-indulgence in strong drink. The Mahábhárata has euphemized the story in the 76th chapter of its first book. According to it, Kacha, son of Vrihaspati, had become a pupil of S'ukra Áchárya with a view to obtain from him the charm of reviving dead men, which none else knew. The Asuras came to know of this, and, dreading lest the pupil should obtain, and afterwards impart, the great

* मद्यमपेयमदेयमग्राह्यं । श्रुतिः ।

secret to the Devas, assassinated him, and mixed his ashes with the wine of his tutor, and thus transferred him to the bowels of S'ukra Áchárya. It happened, however, that during his pupilage Kacha had won the affection of Devayání, the youthful and charming daughter of S'ukra Áchárya, and that lady insisted upon her father to restore the youth to her, threatening to commit suicide if the request was not complied with. S'ukra, unable to decline the favour to his daughter, repeated the charm, and anon, to his surprise, found the youth speaking from his own belly. The difficulty now was to bring the youth out, for this could not be accomplished without ripping open the abdomen of the tutor. S'ukra Áchárya thereupon taught the youth the great charm, and then allowed himself to be ripped open, and Kacha, in grateful acknowledgement of his restoration to life, revived his tutor. Now S'ukra Áchárya, seeing that it was the influence of drink which had made him insensible, and swallow the ashes of a Bráhmaṇ, and that Bráhmaṇ his own pupil, prohibited the use of wine by Bráhmaṇs. "From this day forward," said he, "the Bráhmaṇ, who, through infatuation, will drink arrack *(surá)* shall lose all his religious merit; that wretch shall be guilty of the sin of killing Bráhmaṇs, and be condemned in this as well as in a future world. Let all pious Bráhmaṇs, mindful of their duty to their tutors, as also to the Devas and mankind in general, attend to this rule of conduct for Bráhmaṇs ordained by me for all the regions of the universe."*

S'ukrácharya was followed by Kṛishṇa, who also cursed the wine-bibber, because his kith and kin, the Yádavas, proved the most intractable and unruly of drunkards.

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* यो ब्राह्मणोऽद्यप्रभृतीह कश्चिन्मोहात्सुरां पास्यति मन्दबुद्धिः ।
अपेत धर्म्मा ब्रह्महा चैव स स्यादस्मिन् लोके गर्हितः स्यात्परे च ॥
मया चैतां विप्रधर्म्मोक्तसीमां मर्य्यादां वै स्थापितां सर्व्वलोके ।
सन्तो विप्राः शुश्रुवांसो गुरूणां देवा लोकाश्चोपशृण्वन्तु सर्व्वे ॥
आदिपर्व्वणि ७६ अ० ।

The legends on which these prohibitions are founded may be, for ought we know, after-thoughts, designed to illustrate the heinousness of excessive indulgence, and to give weight to the prohibitions, by invoking the authority of great men against over-indulgence. But the fact remains unquestioned that, from an early period, the Hindus have denounced in their sacred writings the use of wine as sinful, and two of their greatest lawgivers, Manu* and Yajnavalkya,† held that the only expiation meet for a Bráhman who had polluted himself by drinking spirit, was suicide by a draught of spirit or water, or cow's urine, or milk, in a boiling state, taken in a burning hot metal-pot. Añgira, Vas'istha and Paithínasi restricted the drink to boiling spirits alone‡. Devala went a step further, and prescribed a draught of molten silver, copper or lead as the most appropriate.§ Even in cases of accidental drinking of spirits through ignorance on the part of any of the three twice-born classes, nothing short of a repetition of the initial sacramentary rites, effecting a complete regeneration, is held sufficient to purge the sin. The Bráhman woman who transgresses this law, is denied access to the region of her husband, and is doomed to be born a slut, or a cow, or a vulture.* Manu, likewise, provides for judicial cognisance of such offence by Bráhmans, and ordains excommu-

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* Manu XI, 91 to 96

† सुराम्बुघृतगोमूत्रपयसामग्निसन्निभं।
सुरापोऽन्यतमं पीत्वा मरणाच्छुद्धिमृच्छति।
याज्ञवल्क्ये ३ अ०।

‡ सुरापस्तद्विजसमा चाग्निवर्णां सुरां पिबेत्।

§ सुरापाने ब्राह्मणो रूप्यताम्रसीसकानामन्यतममग्निवर्णं पीत्वा शरीरत्यागाच्छुध्यते।

‖ अज्ञानात्तु सुरां पीत्वा रेतोविण्मूत्रमेव वा।
पुनः संस्कारमर्हन्ति त्रयो वर्णा द्विजातयः।

* पतिलोकं न सा याति ब्राह्मणी या सुरां पिबेत्।
इहैव सा शुनी गृध्री सूकरी चोपजायते।

nication and branding on the forehead the figure of a bottle as the most appropriate punishment. "237. For violating the paternal bed, let *the mark of* a female part be impressed *on the forehead with hot iron;* for drinking spirits, a vintner's flag;* for stealing sacred gold, a dog's foot; for murdering a priest, the figure of a headless corpse.

"238. With none to eat with them, with none to sacrifice with them, with none to read with them, with none to be allied by marriage to them, abject and excluded from all social duties, let them wander over the earth.

"239. Branded with indelible marks, they shall be deserted by their paternal and maternal relations; treated by none with affection, received by none with respect: such is the ordiance of Manu." (IX.)

Even drinking of water kept in a wine-bottle is held sinful, and various expiations are recommended for removing the sin.†

Other authorities on law and religion are in no respect less stringent. And yet it would seem that at no time in their history have the Hindus as a nation altogether abstained from the use of spirituous drinks as a means of sensual gratification. Elders, anchorites, sages and learned men, forming the bulk of the priestly race, doubtless scrupulously abstained from them, as they do now in this and other countries; and a good number of pious and respectable householders, and men of rank and position of the other classes followed their example, even as they do now; but as they constituted but a

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* The words are सुरापाने सुराध्वजः ॥ "For drinking surá, a liquor-flag," but as there is no flag known as peculiar to arrack, or arrack-sellers, commentators take the term *surádhvaja* to mean the particular kind of jar or flagon which was formerly used to hold liquor. What the shape of this jar was, I cannot ascertain.

† मद्यभाण्डस्थितं तोयं यदि कश्चित् पिबेद्द्विजः ।
पद्मोदुम्बरबिल्वानां पलाशस्य कुशस्य च ॥
एतेषामुदकं पीत्वा त्रिरात्रेण विशुध्यति ।

fraction of the sum total of the community, their abstinence could not lead to abstinence on the part of the whole nation, or the bulk of it. There was probably also a considerable amount of hypocrisy, or outward expression of horror against wine on the part of the higher orders of the people, such as we know does prevail in the present day; but Sanskrit literature, both ancient and mediæval, leaves no room for doubt as to wine having been very extensively used in this country at all times, and by all classes.

Manu, notwithstanding his stern anathema, found the public feeling or practice so strong against him as to be under the necessity of observing in one place that "there is no turpitude in drinking wine," but "a virtuous abstinence from it produces a signal compensation."* Elsewhere he provides that the soldier and the merchant should not deal in spirituous liquors, leaving the S'údras to follow the trade at their pleasure.† The prohibition in the case of the soldier and the merchant refers to arrack only, so they were at liberty to take all other kinds of liquor, and accordingly the Mitákshará comes to the conclusion that Bráhmans alone have to abstain from all kinds of spirituous drinks, the Kshatríya and Vaishya from arrack or *Paishti*, leaving the S'údras to indulge in whatever they liked.‡

Coming from the age of the Vedas to that of the Sútras, I find that not only the Soma and the Surá of the Sañhitás and the Bráhmanas retained their firm hold on the people, but several new candidates for public favour appeared in the forms

* न मांसभक्षणे दोषो न मद्ये न च मैथुने ।
प्रवृत्तिरेषा भूतानां निवृत्तिस्तु महाफला ॥

† X, 89

‡ त्रैवर्णिकानामुत्पत्तिप्रभृति पैष्टीप्रतिषेधः । ब्राह्मणस्य तु मद्यमात्रप्रतिषेधोऽप्युपनयनप्रभृत्येव । राजन्यवैश्ययोस्तु न कदाचिदपि गौड्यादिमद्यनिषेधः । शूद्रस्य तु न सुराप्रतिषेधो नापि मद्यनिषेधः । इति मिताक्षरा ।

of *Mádhvika* or *mowá*, *Gaudí* or rum, *tála* or toddy wine, and so on. They could not have been manufactured had there been no demand for them, and the conclusion becomes irresistible, that they were used to a considerable extent as a means of sensual gratification, though they seem never to have found a footing in religious ceremonies.

The Rámáyaṇa frequently notices wine and drinking. In one place no less a personage than the great sage, Vis'vámitra, who is the author of a considerable number of the hymns of the Ṛig Veda, is said to have been entertained with *maireya* and *surá* by his host, Vas'ishṭha.* Bharadvája, another great sage, offered wine to Bharata and his soldiers when they spent a night under his hospitable roof. "O ye drinkers of spirits," said the sage, "drink spirituous liquors; O ye hungry, eat; fill yourselves with frumenty and various kinds of juicy meats.†" This sage welcomed Ráma by slaughtering the "fatted calf," but he is not reported to have offered the exile any liquor for his regalement. Two passages, however, occur in the second book of the Rámáyaṇa which afford the most conclusive proof of wine having been extensively used, and held in considerable estimation as a favourite drink in former days. The practice of making vows, at times of danger and misfortune, to offer something choice to the gods, was universal in former days, and is common enough now in most parts of the world. The nature of the offering doubtless differs under different circumstances; but the offering is made all the same. The candles for the Madonna of Roman Catholic countries is, in Bengal, represented by milk, or frumenty, or richer offerings, and rarely is a child sick in the house, or a cow suffering from the pains of parturition, for which some milk is not vowed to the lares and penates. S'ítá, the model of feminine grace

* Rámáyaṇa, Carey's edition, I, p. 462.

† Ibid III, p. 297.

and virtue, was not above this custom, and, when crossing the Ganges in her way to the wilderness of the south, is said to have made a similar vow; but instead of mentioning milk or frumenty, she pledged herself to offer a plentiful supply of arrack. Addressing the river, she said; "Be merciful to us, O goddess, and I shall, on my return home, worship thee with a thousand jars of arrack and dishes of well dressed flesh-meat.*" When crossing the Yamuná she said, "Be thou auspicious, O goddess; I am crossing thee. When my husband has accomplished his vow, I shall worship thee with a thousand head of cattle and a hundred jars of arrack."† Nor were she and her liege lord themselves averse to a cheering cup. The following extract from the last book of the Rámáyaṇa shows that they were as much given to drinking as other people of their time. The passage runs thus: "Embracing S'ítá with both his hands, Kakutstha (Ráma) made her drink pure Maireya wine, even as Indra makes Sachí partake of nectar. Servants quickly served flesh-meat variously dressed, and fruits of different kinds for the use of Ráma Hosts of Apsarases, proficient in singing and dancing, and accomplished and handsome damsels, exhilarated with wine, danced and sang for the entertainment of Ráma and S'ítá."‡ Again, Bharata, returning from his ineffectual mission to bring

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* सुराघटसहस्रेण मांसभूतौदनेन च ।
यक्ष्ये त्वां प्रीयतां देवि पुरीं पुनरुपागता ॥

† स्वस्ति देवि तरामि त्वां पारयेन्मे पतिर्व्रतम् ।
यक्ष्ये त्वां गोसहस्रेण सुराघटशतेन च ॥

‡ सीतामादाय बाहुभ्यां मधु मैरेयकं शुचि ।
पाययामास काकुत्स्थः शचीमिन्द्रो यथामृतं ॥ १ ॥
मांसानि च सुमृष्टानि विविधानि फलानि च ।
रामस्याभ्यवहारार्थं किङ्करास्तूर्णमाहरन् ॥ २ ॥
अप्सरोगणसंघाश्च नृत्यगीतविशारदाः ।
दक्षिणा रूपवत्यश्च स्त्रियः पानवशं गताः ॥ ३ ॥
उपानृत्यन्त रामस्य सीताया हर्षवर्द्धना ।

back Ráma, thus mourns the lost glories of the capital: "No longer the exhilarating aroma of arrack, nor the enchanting scent of garlands, of sandalwood, and of agallochum now wafts through the city."* After these, the presence of wine in the palaces of Rávańa and Sugríva, and the greatest glory of the streets of Kishkindhá having been the aroma of arrack† are not matters of wonder, seeing that those persons were not included in the pale of Hinduism, and the city belonged to a race of monkeys.

Turning now to the Mahábhárata we have abundant evidence to show that most of the leading characters in that great epic were addicted to strong drinks, and no picnic or pleasure party was complete in which wine did not hold a prominent part. The extract from the *Harivanśa* which forms the next article affords a very graphic account of the manner in which such distinguished personages as Baladeva and Krishṇa and Arjuna indulged in drink in the company of their wives, sisters and daughters, and other extracts equally precise and full, might be easily multiplied, if needed. The description of Arjuna's picnic on the Raivata mountain given in the Ádiparva, offers a remarkable instance in point. Elsewhere: "Krishṇa and Arjuna have been seen by me, both lying on a cot, or in their cars, besprinkled with, sandal paste, and having their eyes reddened by *mádhvi* and ásava."‡ Sudeshná, the queen of Mahárája Viráṭa, in the, *Viráṭa Parva*, feeling thirsty, sends her maid, Draupadí, to

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* वारुणीमदगन्धश्च माल्यगन्धश्च मूर्च्छितः ।
चन्दनागुरुगन्धश्च न प्रवाति समन्ततः ॥
११४ अ० २० श्लो० ।

† चन्दनागुरुपद्माभ्यां गन्धैः सुरभिगन्धिभिः ।
मैरयाणां मधूनाञ्च समाहृतमहापथाम् ॥
किष्किन्धाकाण्डे ३१ सर्ग।

‡ उभौ मध्वासवक्षीबौ उभौ चन्दनचर्चितौ ।
उभौ पर्य्यङ्करथिनौ दृष्टौ मे केशवार्जुनौ ॥

her brother, Kíchaka, to obtain from him a flagon of good wine for her use.* In the *Mausala Parva*, the Yádavas are described to have been so overcome by drink at the sea-side watering-place of Prabhása as to have destroyed each other in sheer drunkenness.

According to the Bhágavata Puráṇa, when questioned by his brother Yudhisṭhira as to how the Yádavas were doing Arjuna is reported to have said—"O king, our friends, of whom you are inquiring, losing, through a Bráhmaṇ's curse on the house of our well-wishers, their senses by over-indulgence in Váruṇí liquor, have, without recognising each other exchanged blows and destroyed themselves. Now only four or five are left alive to tell the tale."†

Buddhism must have contributed much to check the spread of drunkenness in India, as it did in putting down the consumption of flesh-meat; but it never was equal to the task of suppressing it. The Játakas and the Avadánas abound in stories of drunkenness, and among the sculptures of Sánchi, several ladies of high rank, standing in the verandahs of the upper storeys of their mansions to behold religious processions in the street, are represented with attendants holding forth tazzas and flagons, which evidently were intended to contain something more potent than water or sharbat. In three love-scenes, the lovers are represented offering overflowing goblets to their mistresses, certainly not with a view

* पर्वणि त्वं समुद्दिश्य सुरामन्नं च कारय ।
तत्रैनां प्रेषयिष्यामि सुराहारीं तवान्तिकं ॥
उत्तिष्ठ गच्छ सैरन्ध्रि कीचकस्य निवेशनं ।
पानमानय कल्याणि पिपासा मां प्रबाधते ॥

† राजंस्त्वयानुपृष्टानां सुहृदां नः सुहृत्पुरे ।
विप्रशापविमूढानां निघ्नतां मुष्टिभिर्मिथः ॥
वारुणीं मदिरां पीत्वा मदोन्मथितचेतसां ।
अजानतामिवान्योन्यं चतुःपञ्चावशेषिताः ॥
श्रीमद्भागवते १ स्कन्ध १५ अध्याय ।

to smother the flame of Cupid with a cooling draught. In a Buddhist drama, entitled *Nágánanda*, lately translated into English by Mr. Ralph Boyd, a scene occurs, the plot of which depends upon the vagaries of a drunkard, who had for his lady-love a maid of honor of the queen.

In the time of Kálidása drinking seems to have been very common, for we find in the S'akuntalá, the Superintendent of Police, who was no other than the king's brother-in-law, proposing, like an English policeman, or cabby, to spend the present offered him by the fisherman who recovered the lost ring, at the nearest grog-shop.

"FISHERMAN—Here's half the money for you, my masters. It will serve to purchase the flowers you spoke of if not to buy me your goodwill.

"JÁNUKA—Well, now, that's just as it should be.

"SUPERINTENDENT.—My good fisherman, you are an excellent fellow, and I begin to feel quite a regard for you. Let us seal our first friendship over a glass of good liquor. Come along to the next wineshop, and we'll drink your health."*

In his graphic description of the triumphal march of Raghu, Kálidása specially notices drinking-booths set up by the soldiery at Rájamundri, to drink the famous cocoa-nut liquor of the place.† The proper way to drink it was in betel-leaf cups. So profusely was this liquor partaken of, that, in the hyperbolical language of the poet the water of the Káverí was tainted by the smell.‡ In a subsequent part of the description, the same soldiery appear to have, in Persia, drunk grape-wine, seated on leather cushions spread under umbra-

* William's S'akuntalá, p. 153.

† ताम्बूलीनां दलैस्तत्र रचिता पानभूमयः ।
नारिकेलासवं योधाः शात्रवञ्च पपुर्यशः ॥ ४४ । ४२ ॥

‡ स सन्यपरिभोगेन गजदानसुगन्धिना ।
कावेरीं सरितां पत्युः शङ्कनीयामिवाकरोत् ॥ ४ । ४५ ॥

geous vine-yards.* A passage in the *Kumára-sambhava*, of the same author, extols a crystal palace on the Himálaya as so exquisite as to be best adapted for a drinking hall.† Drinking must have been common in high circles to justify this comparison. Elsewhere drinking halls, as specially reserved apartments in a palace, are frequently mentioned.

Kálidása is also lavish in his references to drinking by women of quality. In the Raghuvańs'a, he makes Aja bemoan the loss of his wife, Indumati, by this apostrophe: "How will you, dear one of wine-reddened eye, who have quaffed delightful liquor from my mouth, drink the mist-befouled water which I offer with my tears."‡ Adverting to a practice of making Vakula trees (*Memusops elengi*) flower by gargling wine on them, the same author says "Sprinkled over with arrack from charming faces, the blossoms partook of the character of the liquor."§ Again · "Liquors, which excite delightful recreation, overcome by their bouquet the aroma of vakula flowers, never break the current of enjoyment, and are friendly to Cupid, the ladies drink with their husbands."‖ Again, "The ladies in private drank highly

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* विनयन्ते स्म तद्योधा मधुभिर्विजयश्रमम्।
आस्तीर्णाजिनरत्नासु द्राक्षावलयभूमिषु॥ ४। ६५॥

† यत्र स्फटिकहर्म्येषु नक्तमापानभूमिषु।
ज्योतिषां प्रतिबिम्बानि प्राप्नुवन्त्युपहारताम्॥
६ सर्ग ४२ श्लोकः।

‡ मदिराक्षि मदाननार्पितं मधु पीत्वा रसवत् कथं नु मे।
अनुपास्यसि बाष्पदूषितं परलोकोपनतं जलाञ्जलिम्॥
रघु० ८ सर्ग ६८ श्लोक।

§ सुवदनावदनासवसंभृतस्तदनुवादिगुणः कुसुमोद्गमः।
मधुकरैरकरोन्मधुलोलुपैर्बकुलमाकुलमायतपङ्क्तिभिः॥
रघु० ९ सर्ग ३० श्लोक।

‖ ललितविभ्रमबन्धविचक्षणं सुरभिगन्धपराजितकेसरम्।
पतिषु निर्विविशुर्मधुमङ्गनाः स्मरसखं रसखण्डनवर्जितम्॥
रघु० ९ सर्ग ३६ श्लोकः।

exhilarating liquor from the mouth of Agnivarṇa, and he on his turn blossomed like the vakula by drinking of arrack from their mouths."*

In the *Kumára-sambhava* Rati, mourning the loss of her lord Cupid, says:—Rice liquor, which causes the reddened eyes to roll, and speech to get disjointed at every step, has, in thy absence, become a torture to loving women."†

In the 7th book of that work, when describing S'iva's approach to the palace of Himálaya, the poet says that "the faces of the ladies who rushed to the windows in great haste and with half finished toilettes, to behold the procession, evolved the odour of the arrack they had drunk, and their dark eyes appeared like black bees on charming lotuses."‡

Mágha, in the *S'is'upála-badha*, describing Baladeva, says, "when he spoke, the aroma of liquor which had obtained sweetness by lodging in the mouth of Revatí, issued from his mouth."§

The Puráṇas abound in descriptions of wine and drinking, and, though the object of many of them is to condemn the use of wine, the inference is clear, that there was a widespread malady which they proposed to overcome. In some

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* सातिरेकमदकारणं रहस्तेन दत्तमभिलेषुरङ्गनाः ।
ताभिरप्युपहृतं मुखासवं सोऽपिबद्वकुलतुल्यदोहदः ॥
रघु० १९ सर्गे १२ श्लोकः ।

† नयनान्यरुणानि घूर्णयन् वचनानि स्खलयन् पदे पदे ।
असति त्वयि वारुणीमदः प्रमदानामधुना विडम्बना ॥
४ सर्गे १२ श्लोकः ।

‡ तासां मुखैरासवगन्धगर्भैर्व्याप्तान्तराः सान्द्रकुतूहलानाम् ।
विलोलनेत्रभ्रमरैर्गवाक्षाः सहस्रपत्राभरणा इवासन् ॥
७ सर्गे ६२ श्लोकः ।

§ ककुद्मिकन्यावक्त्रान्तर्वासलब्धाधिवासया ।
मुखामोदं मदिरया कृतानुव्याधमुद्वमन् ॥
माघस्य २ सर्गे २० श्लोकः ।

instances, moreover, the object was not reprobation, but mere description, and no less an authority than the Bhágavata Purána enjoins the use of spirit by Bráhmans at the *Sautrámani* rite. So does Vrihaspati, the high-priest of the gods, whose Sañhitá is a standard authority on law.* In the *Markandeya Purána*, the great goddess Durgá is represented as particularly addicted to strong drinks. Kuvera serves her with overflowing goblets of strong liquor, and she drinks and drinks till her eyes become flaming red, and she bursts out in wild laughter.† When girding herself to prepare for her combat with the fierce demon, Mahis'a, she says; "Roar, roar, ye fool, for a moment only, till I finish my drinking."‡

Other instances may be quoted *ad libitum*, but they are not wanted. I shall abstain also from extracting more passages from the poetical literature of the last fifteen or sixteen hundred years to show how frequently references are made to drinking among the higher classes of the community. But I cannot omit noticing the Tantras, which afford the most indubitable proofs of a strong attachment on the part of a large section of the Hindus to over-indulgence in spirituous drinks. These works profess to be revelations made by S'iva to his consort Párvatí, and constitute the life and soul of the modern system of Hinduism. In the way of religious rites, nothing is done in the present day, and nothing has been for the last fifteen hundred years in Bengal, which does not, or did not, borrow its main characteristics from the Tantras. They govern alike the conscience of the followers of S'iva, the worshippers of S'aktí, and the adorers of Vishnu.

* सौत्रामण्यां तथा मद्यं श्रुतौ भक्ष्यमुदाहृतं ।
Apud Viramitrodaya.

† ददावशून्यं सुरया पानपात्रं धनाधिपः ।
ततः क्रुद्धा जगन्माता चण्डिका पानमुत्तमम् ।
पपौ पुनः पुनश्चैव जहासारुणलोचना ॥

‡ गर्ज गर्ज क्षणं मूढ मधु यावत् पिबाम्यहं ।

In the present day, a few ceremonies are called Vedic, and Vedic mantras are used in a great many others; but in most instances, the mantras used have been transmitted through Tantric medium, and it may be said with very little exaggeration that the life of a Hindu from birth to burning-ground is one eternal bondage to the ordinances of the Tantras. Doubtless the Tantras are of various kinds, some Vaishṇavite, others S'ivite, and others designed for the glorification of S'akti, or the female energy, and the last two classes of works are described by the Vaishṇavas, and very justly, as *sanmohini* or "delusive," designed with a view to mislead mankind in this sinful iron age; but even the most bigoted Vaishṇava dares not question their character as revelations by S'iva, and most faithfully owns his allegiance to such Tantras as are of a Vaishṇavite tendency. The S'ivite and S'ákta Tantras are, however, much more numerous, and their followers in the present day may be reckoned by hundreds of thousands. Before the advent of Chaitanya, four hundred years ago, their influence was much greater; and the great bulk of the Hindus professed the faith inculcated in those works. The doctrine of equality which Chaitanya and his successors preached, won over to their side the major portion of the lower orders of the people, and the Vaishṇavas, therefore, now prevail in Bengal; but the Bráhmaṇs could never brook the idea of owning equality with low caste men, so most of them stuck to, and still follow, the doctrines of S'aiva or S'akta worship, and the Tantras, which inculcate them, give free liberty to their votaries to indulge in drinking spirits.

The S'ákta Tantras go further, and insist upon the use of wine as an element of devotion. According to them no worship to the Deví can be complete which is not celebrated with the five great essentials, "fish, flesh, wine, fried grain, and female society," technically called the five M.'s, from the

circumstance of the initial letter of their Sanskrit names being M. To describe the details of the worship would be so shocking that I cannot venture upon the task. Suffice it to say, that the Kaulas, who are the most ardent followers of the S'ákta Tantras, celebrate their rites at midnight in a closed room, where they sit in a circle round a jar of country arrack, one or more young women of a lewd character being in the company; "they drink, drink, and drink until they fall down on the ground in utter helplessness, then rising again they drink, in the hope of never having a second birth."* Or, in Wilson's metrical rendering of this remarkable verse:

> "Let him pledge the wine cup again and again,
> Till he measures his length on the ground.
> Let him rise and once more the goblet drain,
> And with freedom for aye, from a life of pain.
> Shall the glorious feat be crowned."

*(Essays and Lectures, I. p. 261.)*

In such circles *(Bhairavi-chakra)* Kaulas of all castes are admissible, for, say the Tantras, when once in the mystic circle, all castes are superior to Bráhmans, though on coming out of it, they revert to their respective ranks in civil society.† It is true that this "left-handed" or secret worship *(vámáchára)* is observed by only a few of the most ardent votaries of the sect, at long intervals; and the Tantras inculcate absolute secrecy in its performance, and disclosure is condemned as calculated to frustrate all its merits, and prove highly disreputable; but the use of wine is enjoined at the ordinary daily prayers or sandhyás, and on particular occasions it is a *sine qua non*. I knew a highly respectable widow lady, connected with one

* पीत्वा पीत्वा पुनः पीत्वा पुनः पतति भूतले।
उत्थाय च पुनः पीत्वा पुनर्जन्म न विद्यते॥
महानिर्वाणतन्त्रं।

† आगता भैरवीचक्रे सर्वे वर्णाः द्विजोत्तमाः।
निर्गता भैरवीचक्रात् सर्वे वर्णाः पृथक् पृथक्॥

of the most distinguished families in Calcutta, who belonged to the Kaula sect, and had survived the 75th anniversary of her birthday, who never said her prayers, (and she did so regularly every morning and evening) without touching the point of her tongue with a tooth-pick dipped in a phial of arrack, and sprinkling a few drops of the liquor on the flowers which she offered to her god. I doubt very much if she had ever drunk a wine-glassful of arrack at once in all her life, and certain it is that she never had any idea of the pleasures of drinking; but, as a faithful Kaula, she felt herself in duty bound to observe the mandates of her religion with the greatest scrupulousness. That thousands of others do so, I have every reason to believe. In some parts of Bengal, where arrack is not easily accessible, such female votaries prepare a substitute by dropping the milk of a cocoanut in a bell-metal pot, or milk in a copper vessel, and drink a few drops of the same. Men are, however, not so abstemious, and the Tantras ordain a daily allowance of five cupsful, the cup being so made as to contain five tolás, or two ounces,* *i. e.*, they are permitted to take ten ounces or about a pint of arrack daily.

The most appropriate way of drinking liquor is in the mystic circle above noticed; but as this cannot be got up every day, the devotee takes the bulk of his potation alone after the evening prayer. He is also at liberty to drink wherever he likes, and in whatever company chance may throw in his way, provided he faithfully observes one condition, and that is, never to drink without neutralizing the curse of S'ukra Áchárya, and purifying the drink. This is done by drawing a triangular figure on the ground with the right index finger dipped in liquor, placing the flagon thereon, and repeating over it three mantras, which say—(1) "Om! The great Brahma is one alone; verily, he is both material and im-

* पानपात्रं प्रकुर्वीत न पञ्चतोलकाधिकं ।

material. Through him I destroy the sin of Bráhmanicide which has originated in (the murder of) Kacha (son of Vṛihaspati.) (2) Om! O goddess, dweller in the orb of the sun, born in the abode of waters, and consisting of the sacred mantra of Amá, remove the curse of S'ukra Áchárya. (3) Om! If the Pranava be the source of the Vedas, and essentially and solely the felicity of Brahma, by it, the truth, O goddess, cast away the sin of killing Bráhmans.*" After repeating the mantras, the word *vañs'a* is to be muttered several times, and then repeating his own especial *vījamantra*, the votary should meditate on the form of his favourite divinity, which is generally a manifestation of Káli, and then on that of S'iva, who is described as "blood red in complexion, four-handed, three-eyed, benign, beneficent, bearing a mass of matted hair on his head, a necklace of snakes round his neck, a diminutive tomtom, a skull, a club, and a noose in his hands, and arrayed in a tiger skin,"† Ten repetitions of the gáyatri after this and of the words *hum* and *phat* effect the complete purification of the grog, and the neutralization of the curse. At the formal mystic circle, several other mantras are repeated, and some formulæ gone through; but they are not absolutely necessary for the ordinary every-day ritual, or for

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* ओं एकमेव परं ब्रह्म स्थूलसूक्ष्ममयं ध्रुवं ।
कचोद्भवां ब्रह्महत्यां तेन ते नाशयाम्यहं ॥
ओं सूर्यमण्डलसम्भूते वरुणालयसम्भवे ।
अमाबीजमये देवि शुक्रशापाद्विमुच्यतां ॥
ओं वेदानां प्रणवो बीजं ब्रह्मानन्दमयं यदि ।
तेन सत्येन ते देवि ब्रह्महत्यां व्यपोहतु ॥
कौलावल्यां ८ पटल ।

† रक्तवर्णं चतुर्बाहुं त्रिनेत्रं वरदं शिवं ।
जटाजूटधरं देवं नागयज्ञोपवीतिनं ॥
डमरुं कपालं मुद्गरं पाशमेव च ।
धारयन्तं स्मरेद्देवं व्याघ्रचर्माम्बरं शिवं ॥
कौलावल्यां ८ पटलः ।

the purification of the drink. In practice the ritual above set forth, or a modification of it, including of course the three important mantras, does not take much time, and I have seen it completed in two or three minutes. But whether an epitome is adopted, or the whole ritual be gone through, some ceremony is imperatively necessary; for the Kaula who drinks wine without purifying it, becomes a criminal of the worst class. According to the *Utpatti Tantra*, "the Bráhmaṇ who drinks unpurified liquor is guilty of killing a Bráhmaṇ; by drinking purified arrack he becomes as pure as a flaming fire. At the Sautrámaṇi rite and in the Kaula circle, a Bráhmaṇ should always drink arrack; but by drinking elsewhere for the mere gratification of his senses, he loses his Bráhmaṇhood.*

The *Mátriká-bheda Tantra* is most eloquent in praise of drinking. It makes S'iva address his consort thus: "O sweet-speaking goddess, the salvation of Bráhmaṇs depends on drinking wine. I impart to you a truth, a great truth, O mountain-born, (when I say) that the Bráhmaṇ who attends to drinking and its accompaniments forthwith becomes a S'iva. Even as water mixes with water, and metal amalgamates with metal; even as the confined space in a pot merges into the great body of surrounding space on the destruction of the confining vessel, and air commingles with air, so does dear one, a Bráhmaṇ melt in Brahma, the great soul. There is not the least doubt about this, O mountain-born. Similitude with the divinity, and other forms of liberation are designed for Kshatríyas and others; but true knowledge can never be acquired, goddess dear, without drinking wine; therefore should Bráhmaṇs always drink. No one becomes

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* असंस्कृतां सुरां पीत्वा ब्राह्मणो ब्रह्महा भवेत् ।
संस्कृतान्तु सुरां पीत्वा ब्राह्मणो ज्वलदग्निवत् ॥
सौत्रामण्यां कुलाचारे ब्राह्मणः प्रपिवेत् सुरां ।
अन्यत्र कामतः पीत्वा ब्राह्मण्यादेव हीयते ॥

a Bráhmaṇ by repeating the gáyatri, the mother of the Vedas; he is called a Bráhman only when he has knowledge of Brahma. The ambrosia of the gods is their Brahma, and on earth it is arrack; and because one attains the character of a god *(suratva)*, therefore is arrack called *surá*.* The work, nevertheless, will admit of no drinking without the purification aforesaid. "The three mantras for the neutralization of the curse of the Bráhman (S'ukra Áchárya) should always be repeated. Then only does arrack become full of Brahma. Even as a fire flames up when clarified butter is poured on it, so does arrack become the giver of salvation on the neutralization of the curse. Therefore should Bráhmaṇs always drink (after purifying his grog). Such a drinker, is a true Bráhmaṇ; he is proficient in the Vedas; he is truly an Agnihotri; he is thoroughly initiated; what more can I say, O noblest of goddesses, when I add that he rises above the three qualities (inherent in matter). This is the true path to salvation; but it should be kept a secret from bestial people (*pas'u*, men who do not drink wine), for

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* ब्राह्मणस्य महामोक्षं मद्यपाने विधीयते ।
ब्राह्मणः परमेशानि यदि पानादिकं चरेत् ॥
तत्क्षणात् शिवरूपोऽसौ सत्यं सत्यं हि शैलजे ।
तोये तोयं यथा लीनं तेजसं तेजसि यथा ॥
घटे भग्ने यथाकाशं वायौ वायुर्यथा प्रिये ।
तथैव मद्यपानेन ब्राह्मणो ब्रह्मणि प्रिये ॥
लीयते नात्र सन्देहः परमात्मनि शैलजे ।
सायुज्यादि महामोक्षं नियतं ब्राह्मणादिषु ॥
मद्यपानं विना देवि तत्त्वज्ञानं न लभ्यते ।
अतएव हि विप्रस्तु मद्यपानं समाचरेत् ॥
वेदमाता जपेनैव ब्राह्मणो न हि शैलजे ।
ब्रह्मज्ञानं यदा देवि तदा ब्राह्मण उच्यते ।
देवानाममृतं ब्रह्म तदेव भौतिकी सुरा ।
सुरत्वं भोगमात्रेण सुरा तेन प्रकीर्तिता ॥

under the head of *madya*, and his succesors have added largely to the list. The twelve principal liquors of this sage are, 1, *pánasa*, or jack liquor; 2, *drákshá*, or grape liquor; 3, *mádhúka* or honey liquor; 4, *khárjjura*, or date liquor; 5, *tála*, or palm liquor; 6, *aikhshava*, or cane liquor; 7, *mádhvíka*, or mowá liquor; 8, *saira*, long-pepper liquor; 9, *arishta*, or soap-berry liquor; 10, *maireya*, or rum; 11, *nárikelaja*, or cocoa-nut liquor; 12, *surá*, or arrack, otherwise called *váruni* or *paishti*.* This verse as quoted in the *S'abdakalpadruma* gives *tánka*, or wood-apple liquor, and the Vishnu Sanhitá gives *koli* or jujube liquor in lieu of Saira.

The mode of preparing these liquors is briefly described in the *Matsyas'ukta Tantra*. It says, "Place unripe jack, mango, and plums, in a jar, and pour on it daily a quantity of unboiled milk, and add some flesh-meat; put therein hemp leaves and sweet lime on alternate days, and when duly fermented, distil, and this is jack wine"†

For the 2nd, the grape juice is to be fermented with curds, honey and ghi, distilled in the usual way, and flavoured with manjit, and chiretta.‡ This is of course brandy-bitter, pure and simple, dyed with manjit instead of burnt sugar. The 3rd has honey for its principal ingredient, and with it is to be associated Vidanga (a bitter drug), salep-misri, long-

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* पानसं द्राक्षमाधूकं खार्जुरं तालमैक्षवं।
माध्वीकं सैरमारिष्टं मैरेयं नारिकेलजं॥
समानानि विजानीयात् मद्यान्येकादशैव तु।
द्वादशन्तु सुरामद्यं सर्वेषामधमं स्मृतं॥

† अपक्वं पनसञ्चैव आम्रञ्च बदरं तथा।
स्थापयित्वा घटे नित्यं दद्यादामपयःपयम्॥
तैमोदवं विजयाञ्चैव मातुलुङ्गं तथैव च।
मांसादिकं ततो दद्यात् मद्यामात्र स्मृतमीरितम्॥

‡ दधिमधुघृतञ्चापि मञ्जिष्ठं तिक्तकं तथा।
अनुपाने तु देवेशि द्राक्ष-मद्यं प्रकीर्त्तितं॥

pepper, and salt.* The 4th has ripe dates for its basis, and with it is mixed jack fruit, ginger, and the juice of the Soma vine.† The 5th is made with the ripe palm fruit spiced with danti *(Croton polyandrum)*, and the leaves of the *kakubha* plant.‡ The 6th has sugar-cane for its basis, and black-pepper, plums, curds, and salt for adjuncts.§ The 7th is made of the blossoms of the *Bassia latifolia*, mixed with sugar and ripe bel fruit.|| The 8th is made of molasses and long-pepper. The Tantra follows the reading of Rájá Rádhákánta Deva, and has *táñka* instead of *saira*, and it should be made, according to it, with the root of the *Asparagas racemosus*, the root of the wood-apple tree, a drug called *laksman*, lotus flowers, and honey.¶ The 9th, according to the reading of the Mitákshará, is a liquor made from soap-berry plant with molasses, but according to the Tantra, of the root of the ægle marmelos, plums, and sugar.** The 10th of the above list occurs in the Tantra under the name of *gaudi*, or rum, made from molasses, the adjuncts during fermen-

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* विडङ्गं शालवो मूलं ।
मधुना सह संस्थाप्य शेषे पाकं समाचरेत् ।
पिप्पली लवणं दत्वा मधुना मद्यमीरितं ॥

† पानसं पक्वखार्ज्जुरं आर्द्रं सोमलतारसं ।
एकीकृत्याग्निसन्धानात् खर्ज्जुरं मद्यमीरितम् ॥

‡ पक्वतालं दन्तिशाकं ककुभञ्च तथैव च ।
एतैरेव सुसन्धानात् तालमद्यं प्रकीर्त्तितम् ॥

§ इक्षुदण्डं मरीचञ्च वदरञ्च तथा दधि ।
शेषे तु लवणं दत्वा इक्षुमद्यं प्रकीर्त्तितम् ॥

|| नवं मधु तथा विल्वं पक्वं शर्करया सह ।
सन्धानाज्जायते मद्यं माध्वीकं शरतो रसं ॥

¶ शतावरी टङ्कमूलं लक्ष्मणं पद्ममेव च ।
मधुना सह सन्धानात् टङ्कमाध्वीकमीरितं ॥

** मालूरमूलं वदरी शर्करा च तथैव च ।
एषामेकत्र सन्धानात् मैरेयं मद्यमीरितं ॥

tation being curds, hemp leaves, and a drug called *karíkaná*.* The 11th is made of the milk, or toddy, of the cocoa-nut, mixed with plantains, ripe emblic myrobolans, and the drug Indrajihvá.† The 12th has half-boiled rice, barley, black-pepper, lemon juice, ginger, and hot water for its ingredients. The rice and barley are to be digested in hot water for two days, then boiled, then spiced with the other ingredients, and allowed to ferment thoroughly, and lastly distilled.‡

The arrack described in the Vedas was somewhat differently prepared from the way above detailed, as will be seen in the sequel. All the other liquors noticed in Sanskrit works were, likewise, first fermented, and then distilled; none manufactured, as European wines are, by mere fermentation. In fact, they are all spirits differently flavoured with various kinds of spices, fruits, and herbs, to suit different tastes, and not wines; and the word wine has been used in this paper in its secondary sense of intoxicating liquor.

A liquor flavoured with aniseed has enjoyed considerable celebrity in India for a long time. It is said that a celebrated Tántric pandit of Nadiá, who bore the title of Ágamavágísa, or "the Lord of the Science of Ágama," was particularly fond of it, and used to take a *lotá* full of it every day. People, suspecting him of this weakness, watched him one evening when he was returning from his vesper prayers at the river side. He was seen to come out on the sly from a

* दधि सैन्धवविजया तथैव च करीकणा।
गुडेन सह सन्धानात् गौडीमद्यं प्रकीर्त्तितम्॥

† इन्द्रजिह्वा पक्वधात्री नारिकेलजलं तथा।
कदलीफलसन्धानात् मद्यं नारिकेलजं॥

‡ शष्कुलीमर्द्धसिद्धान्नमुष्णोदकसमन्वितम्।
पश्चात् सन्धापयेत् किञ्चित् स्थापयित्वा दिनद्वयम्॥
तेषेऽहनि तु सम्पक्वे सौरभं तत्र निःक्षिपेत्।
शृङ्गवेरं मरीचञ्च मातुलुङ्गं तथैव च॥
एतेषामेव सन्धानात् पैष्टीमद्यं प्रकीर्त्तितम्॥

grog-shop with his water-pot filled with aniseed arrack, and taxed by a large crowd for conduct so disreputable in a Bráhmaṇ of his learning and sanctity. He denied the charge, and placed the *loṭá* before his accusers, when lo! the pot appeared to contain milk. "A miracle, a miracle," cried the crowd, and the paṇḍit, instead of being degraded, was canonised as the most favourite son of the Deví; the fact being, that the wily toper knew well that aniseed liquor mixed with a little water becomes milky, and had taken the precaution to doctor it so with a view to provide against possible contingencies.

Among the many omissions in Pulastya's list, the Tánka, the Koli, and the Kádambarí appear the most prominent. The name of the first is met with largely in the Tantras. The second is of rare occurrence. The last was a favourite drink of Baladeva, and was at one time held in high repute. In medical works, various other kinds of liquor are also mentioned, mostly as aphrodisiacs, but some as medicinal. The following enjoys a high repute as an invigorating tonic. I quote a passage describing it as it is the only one in which an account is given (imperfect as it is) of the still used for distillation. "Take of fresh molasses 100 palas,* water 30 palas, and mix them in an earthen vessel. Take of *Vávari* bark *(Cassia arabica?)* and jujube bark, five *prasthas* each, (a prastha is equal to 128 tolás,) a few betel-nuts, 32 tolás of lodhra *(Symplocos racemosa)*, and two palas of ginger. Dilute the molasses mixture in water, add to it successively the ginger, the Vávari bark, and the jujube bark, mix well, then cover the vessel, and lay it by for three days. Then add the betel-nuts and powdered lodhra, recover the vessel, tie down the cover, lute it, and lay it by for twenty days. Take the apparatus called *mayúra yantra*, a strong earthen vessel of

* A pala, according to some, is equal to 4 tolás; according to others, 8 tolás.

the shape of a peacock, place it on a hearth over a slow fire, pour into it the fermented mixture, and add thereto half a pala each of powdered betel-nut, sailabolaka, deodar wood, cloves, padmaka (a drug), leaves of the *Andropogon muricatum* (a fragrant grass), sandal wool, *Anithum sowa, Ligusticum ajwana*, black-pepper, the white and the black cummin-seed, carraway, jatámánsi, nutmegs, *Cyprus rotundus (mutha)*, grinthiparni (a drug), dried ginger, methi (a spice), and small cardamums. Now cover the vessel with two upturned chatties, attach thereto two pipes, and carefully distil the liquor. This wine should be drunk daily. It promotes the secretion of the constituents of the body, and is invigorating."*

Although all the various Indian liquors are essentially the same, *viz.*, rum, differing only in being differently flavoured, in the eye of the Hindu law, the liquors made from molasses, mowá, and rice are held to be more offensive than the others, and the punishment for drinking them, more severe.

The flavouring ingredients used in the preparation of these liquors, it is said, materially alter their virtues, and medical works prescribe different liquors for different com-

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* नूतनं गुडमश्वत्थं शतमेकं पलं तथा ।
जलं त्रिंशत्पलं देयं स्थापयेन्मृद्भाजने ।
धातकीत्वचमश्वत्थं बदरीत्वचमेव च ।
प्रस्थं प्रस्थं प्रदातव्यं पूर्वं देयं यथोचितं ॥
ओषधं कुडवं दत्वा चार्द्रकस्य पलद्वयं ।
गुडं मधूमिकं दत्वा टापयेद् द्विमासं भिषक् ॥
प्रथमे चार्द्रकं देयं द्वितीये धातकीत्वचं ।
तृतीये बदरीं दत्वा गोमयिला भिषग्वर ॥
शुष्के शतावरीं दत्वा स्थापयेद्दिनसप्तक ।
पुनश्च गोधूमचूर्णं टापयेतदनन्तरं ॥
शुष्के शतावरीं दत्वा दश लता च बश्नमे ।
सुरामध्यं कृत्वा स्थापयेद्दिनविंशतिः ॥
सहस्रदिनं गोविकाधाने मयूराकृतिं समर्थं ।

plaints. For ordinary use the rum from molasses is described to be the most healthful in the autumn (October and November), the arrack from paddy in the cold and rainy seasons; and the mowá liquor in spring, summer, and the rainy season. Connoisseurs were also formerly particular as to the age of their liquor, and the older the liquor, the better was it appreciated.

Nor were they, it would seem, content with their home manufactures, for it appears from Arrian's Periplus of the Erythrian Sea that large quantities of foreign wine were regularly imported two thousand years ago, and these met a ready sale in the country. The varieties mentioned are 1, Λαοδικηνος,, or wine of Laodicea in Syria; 2, Ιταλικος or Italian wine, and 3, Αραβικος or Arabian wine.* These, from the circumstance of their having been brought from distant countries, must have been much more costly than the spirituous liquors of India, and consequently none but the wealthy could afford to drink them.

The different liquors were always taken neat, and it was necessary, therefore, to take some saline, sub-acid, or sweet

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यथाविधि प्रकारेण मन्दमन्देन वह्निना ॥
चुल्लीमध्ये निधातव्यं मृत्तिकादृढभाजने ।
तदौषधञ्च तन्मध्ये उद्धरित्वा विनिक्षिपेत् ।
नालञ्च युगलं दत्वा कुम्भौ च गजकुम्भवत् ।
कुम्भमध्ये निधातव्यं पूगञ्च शैलबालकं ॥
देवदारु लवङ्गञ्च पद्मकोशीरचन्दनं ।
शतपुष्पायमानी च मरिचं जीरकद्वयं ॥
शठी मांसीत्वगेला च जातीफलसमुस्तकं ।
ग्रन्थिपर्णौ तथा शुण्ठी मेथी मेषी च चन्दनं ।
एषां चार्द्धपलान् भागान् कुट्टयित्वा विनिक्षिपेत् ।
यथाविधिप्रकारेण चालनं दापयेत् सुधीः ॥
बुद्धिमान् सौजनं ज्ञात्वा उद्धरेत् विधिवत् सुरां ।
एतन्मद्यं पिवेन्नित्यं यथा धातुबलक्रमात् ॥
इति शुक्राचार्य्यविनिर्मिता मृतसञ्जीवनी सुरा ॥ ० ॥

* Vincent's Periplus II, Appendix, p. 67.

stuff, to remove the pungency or smarting caused in th mouth by the raw spirit. For this purpose fruits, roaste mince-meat, and cakes were most approved by the highe classes, but the lower orders had to content themselve with parched or fried grains and pulses seasoned with sal and chilli. These wine biscuits were held in great requisitior and were known by various technical or slang names, such a *Upadars'a*, *Upadaṅsa*, *Avadaṅsa*, *Chakshana*, *Madyapásana Mudrá*, &c. I have noticed the word *nakuli* also so used it the Bengali Chaṇḍí and some of the Tantras, but I am no able to put my hand on the text of the latter just now. The word probably came from *nakuli*, flesh-meat, but I learn from my friend Mr. Blochmann, that in Arabic the word is used in the same sense, and it is possible that some of the modern Tantras borrowed it from the Muhammadans. Anyhow, the word has become generally current, and one of the names of S'iva is *Nakules'a* or "lord of wine biscuits," and no drinking party was formerly complete without a good supply of these tit-bits.

Looking to the nature of the climate, the character and temper of the people, and the anathemas which the S'ástras have, from time to time, hurled against the drunkard, it might be taken for granted that men of the higher castes, and good people generally, did set their faces against drinking, or, at least, did preserve an outward appearance of horror against those who openly outraged the mandates of the Smriti; but it would seem that for all that cases of delirium tremens turned up pretty frequently, and several very expressive names were current in the country at one time to indicate the disease. One of them means "wine horror," *madátanka*; another "wine disease," *madátyaya*; a third "wine complaint," *[illegible]*; &c. The descriptions of the disease, as given in Sanskrit medical works, are detailed and precise, discriminating carefully between the illness caused by excess, and that by sudden

abstinence after a protracted over-indulgence. These names and descriptions could not have come to existence, had there not been immoderate drinking in many instances to give rise to the complaint.

There is another indication in medical works which is worthy of note; it is the multiplicity of receipts for removing the odour of wine from the mouth. None but the rich or well-to-do could have required such prescriptions to guard against the accusation of having taken wine, and the existence of the recipes implies the existence of a class of men who were addicted to drinking, and yet wished to pass among their neighbours for teetotallers.

Of fermented beverages, which were drunk without previous distillation, four kinds are mentioned, *viz.* cocoa toddy, palm toddy, date toddy, and the Soma nectar. The first was known only to those who inhabited the sea coasts, where alone the tree which yielded it is met with. The acetous fermentation in its case was so rapid, that transmission of the liquor from one part of the country to another was out of the question, and none but those who lived in the neighbourhood of the tree could drink the juice in a vinous state. The date and the palm toddies suffered in the same way, and were unfit for transmission to distant places; but the trees which yielded them were common almost all over India, and so they were more easily accesible, and more widely known. But they never seem to have attained any great popularity. The soma nectar was likewise open to this objection; for it, too, had no keeping quality, and, for aught we know, was never manufactured for sale; but it was associated with the earliest history of the Aryans, even before they separated from the ancient Persians, and enjoyed the proud pre-eminence of a god as long as Vedic rites governed the conscience of the people. The Rig Veda Sañhitá is most lavish in its praise, and all the four Vedas furnish innumerable mantras for repetition at every stage of its

anufacture, and from the moment a resolution was made to mmence one of the rites at which it was to be used (and all e principal rites such as the Dars'a, Púrṇamása, Jyotish-ma, Ukthya, Shoḍas'iman, Vájapeya, Atirátra, Áptaryáma, c., could not be celebrated without it), nothing could be ne without appropriate mantrás, and the ritual throughout as most complicated and tedious. It would be foreign to e object of this paper to describe in any detail the several eps in the manufacture of the beverage, suffice it to say at it was made with the expressed juice of a creeper (*Ascle-as acida*, or *Sarcostema viminalis*), diluted with water, mixed th barley meal, clarified butter, and the meal of wild paddy *ívára)*, and fermented in a jar for nine days*

The juice of the Soma creeper is said to be of an acid ste, but I have not heard that it has any narcotic pro-rty; I am disposed to think, therefore, that the starch the two kinds of meal supplied the material for the nous fermentation, or, in other words, played the part of alt, and the Soma juice served to promote vinous fer-entation, flavour the beverage, and check acetous decom-sition, in the same way that hop does in beer. Any-w, it may be concluded that a beverage prepared by the nous fermentation of barley meal, should have strong intoxi-ing effects, and it is not remarkable, therefore, that the das should frequently refer to the exhilaration produced its use in men and gods. The addresses to Indra, Agni, tra, and other gods in the Ṛig Veda are full of allusions to hilaration caused by the use of the soma. "The sacred ayer, desiring your presence, offers to you both, Indra and

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* Stevenson's Sama Veda, p. 5, Haug's Aitareya Bráhmana, I., p. 6, rning's Ancient India, I., p. 86. For the mantras used in the course of paring the soma beverage vide, Taittiriya Sanhita, Kanda I., Pr., and Ano-. III., IV., and Kanda, VI., Pr. I. to IV. The Kalpa Sutras and the Sutras ugas supply the details.

Agni for your exhilaration, the *Soma* libation. Beholders of all things, seated at this sacrifice upon the sacred grass, be exhilarated by drinking of the effused libation." (I., 7., xxvii., 4, 5.) Other quotations on this subject may be easily multiplied, but they are not needed. Suffice it to say that the object of drinking the Soma is expressly stated to be intoxication: *madáya arvenehi somakámam tváhe rayam sutastasya pibá madáya ;* and Indra drinks it in such large quantities, that his belly becomes enormously distended. *Uruvya chájaṭhara avrishasva.* As regards men, its effects are described as equally exhilarating and inebriating. A story occurs in the Black Yajur Veda in which a sage, Vis'varúpa by name, son of Tvashṭu, while engaged at Soma sacrifice, is said to have indulged so inordinately in the exhilarating beverage as to have vomited on the animals brought before him for immolation. For this, however, no proof is wanted, for the effect of Soma on the gods could have been only assumed by a knowledge of what it was on the worshippers.

The Soma beer lasted for several days after its nine days' fermentation. In some of the rites it certainly lasted for twelve days, but how much longer I cannot ascertain. It is certain, however, that it could not be kept sound for any great length of time, without distillation, and in a distilled spirit the Soma would be of no use. Accordingly, we find that no Soma juice was used when arrack was distilled from fermented meal. The liquor, thus prepared, was, as already stated above, called surá, and it was used as an article of offering to the gods in two important rites, namely, the *Sautrámaṇi* and the *Vájapeya.* The mode of preparing it is described in the canons of Baudháyana and Kátyáyana. They recommend three articles, *viz.*, sprouting paddy, the sprout brought on by steeping paddy in water, very much in the same way as malt is produced, slightly parched barley steeped in curds and diluted butter-milk, and coarse powder of the same steeped

in whey. After proper fermentation, this was distilled in the usual way, and the liquor produced was poured in oblations on the sacred fire in lieu of the soma beer. The *Taittiríya Bráhmaṇa* supplies a number of mantras for the preparation of the liquor, but I can nowhere find any description of the still in which the distillation was effected. Kátyáyana recommends that the different articles required for the manufacture of the liquor should be obtained by barter, and not by purchase with coins. In the Sautrámani rite, the offering of the liquor should be preceded by the immolation of three animals, a bull being one of them The worshippers were required to partake of the remnant of the offerings, as the ceremony would be incomplete without the repast.

# VIII.
# A PICNIC IN ANCIENT INDIA.

The religious obligations of ancient Indians. The obligations rested principally on Bráhmaṇs. Want of information about ancient social life. Principal characters in the Picnic. The scene. Association with courtezans. Baladeva's constancy. Drinking. Varieties of spirituous drinks. Wine biscuits. Banquet. Buffalo-meat. Dressing of meat. Game birds. Sauces. Carving. Cakes. Presence of ladies at the festive board. Dancing. Partners at dancing. Music and dancing masters for ladies. Maidens prohibited to join in picnics. The picnic. The Party. Recreations in the sea water. Repast. Cruising. Dramatic exhibitions. Dancing. Nárada's frolics. A second series of aquatic recreations. The banquet. The bill of fare. Music, singing and dancing. The *Chhalikya* tune.

THE Vedas represent the ancient Indo-Aryans to have been eminently religious in all their actions. According to them, every act of life had to be accompanied by one or more mantras, and no one could rise from his bed, or wash his face, or brush his teeth, or drink a glass of water, without going through a regular system of purifications, salutations, and prayers; and if he really did practice all the rites and ceremonies enjoined in those works, his life doubtless must have been an unbroken chain of religious observances from birth to burning-ground. It would seem, however, that the bulk of the community did nothing of the kind. Certain sacraments and initiatory rites everybody had to go through, and well-to-do persons had to celebrate feasts and fasts from time to time; but in all such cases, the heaviest burden they had to bear was a pecuniary one, the actual performance of the ceremonies being left to the priesthood. Before the Tántric form of worship got currency in the country, the S'údra had literally nothing to do by way

of religious exercise beyond evincing a reverential devotion when he employed one or more Bráhmaṇs to perform a sacrifice, or get through a sacrament, and to salute and bow as often as required. No Vedic mantra could be repeated by him even when offering water to the spirits of his ancestors, and there was, for him, no other set form of prayer wherewith to address the Great Father of the universe. The Vais'ya and the Kshatriya, as belonging to the twice-born classes, and having the right to wear the sacrificial cord, were at liberty to repeat Vedic mantras, and had to repeat them when going through particular sacraments, or performing s'ráddhas; but, like the S'údras before the Tántric period, they had no regular service for daily observance, beyond one or more salutations to the great soul of the sun, or the repetition of the Gáyatrí. At the periodical feasts and fasts they, as Yajamánas, or the institutors of sacrifices, provided the wherewithal to perform the rites and ceremonials, installed the priests in their respective offices, and recompensed them for their labour. But in the actual work of repeating mantras, offering oblations, and going through the ritual, they took but a slender share.

It was the Bráhmaṇ only for whom the Vedas enjoined an endless round of rites, ceremonies and observances, innumerable *mantras for repetition on different occasions*, and a host of fasts and penances extending from a single night to many years. But as they formed but a small section of the general community, their examples, however well calculated to restrain immorality and induce a religious spirit, did not keep the people engaged in actual religious ceremonies for any protracted period, or too *frequently*. At any rate, the claims of religion on their time and attention were not greater than what they were on those of other nations of antiquity; and the people at large ate and drank and enjoyed life without any serious let or hinderance. Even Bráhmans,

when not actually engaged in the performance of sacrifices, were not debarred from the sweets and pleasures of the world; and the most ancient treatise* on the various ways of enjoying the society of women, *i. e.*, on the *ars erotica*, is due to a hoary sage named S'áñkháyana, whose ordinances are held to be quite as sacred as the Vedas themselves.

Little is, however, known as to how the people enjoyed themselves in their light moments, and of the games, pastimes, recreations and entertainments which pleased them the most. I think, therefore, that the following extract from the Harivañs'a Parva of the Mahábhárata, (chapters 146-47)† affording a most graphic picture of an ancient Indian Picnic, will not be uninteresting to those who are curious on the subject. It depicts a state of society so entirely different from what we are familiar with in the present day, or in the later Sanskrit literature, that one is almost tempted to imagine that the people who took parts in it were some sea-kings of Norway, or Teuton knights carousing after a fight, and not Hindus; and yet, if the S'ástras are to be believed, they were the Hindus of Hindus, the two most prominent characters among them being no less than incarnations of the Divinity, and another a holy sage, who had abjured the world for constant communion with his maker, and whose law-treatise *(Nárada Sañhitá)* still governs the conscience of the people.

The scene of the Picnic was Piṇḍáraka, a watering-place on the west coast of Guzaraṭ, near Dvárká. It is described as a *tírtha* or sacred pool, and the trip to it is called *tírtha-yátrá*, or a pilgrimage to a holy place; but the sequel shows that the trip was one of pleasure and had nothing religious about it. The party, headed by Baladeva, Kṛishṇa, and Arjuna, issued forth with their families and thousands of

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* S'áñkháyana Káma Sútra.

† Owing to an error in numbering in the Asiatic Society's edition of the Harivañs'a, the chapters there appear as 147 and 148.

courtezans; spent the day in bathing, feasting, drinking, singing and dancing; and returned home without performing any of the numerous rites and ceremonies, which pilgrims are bound by the S'ástras to attend to at sacred places.

The presence of the courtezans in the company is a fact worthy of special note, for, although Hindu society has always looked upon fallen women with kind, indulgent eyes, and instances are on record of such persons having been admitted into a respectable household after proper expiations, the S'ástras are peremptory in condemning all association with them as long as they remain unreclaimed, especially on the part of women of family, and modern and mediæval custom has never permitted any such association as is implied by bathing, eating, drinking, dancing, and singing in their company. It indicates a sad laxity of morals, and the state of society which permitted this, cannot but be condemned. The Yádavas, however, felt no compunction in that respect, and not only allowed their wives and daughters freely to mix with harlots, but themselves joined the party, and indulged in unrestrained debauchery in the presence of parents and seniors. The only person who formed an exception was Baladeva. His constancy to his only wife, Revatí, is the theme of praise everywhere; and never has his character been assailed for even the slightest neglect of his conjugal duty. At the Picnic he appears, as was his wont, tottering with drink; but he is always beside his consort, and gratifies himself by bathing and singing and dancing with her, and her alone.

Drinking appears to be another indulgence to which the Yádavas were extremely addicted. Family women and prostitutes freely joined the men in these bacchanalian orgies, and the poet who records their deeds, seems to take a delight in pointing how some tottered, and others fell, and others became reckless. The stuff they drank was of five kinds namely, *kádambari*, *mádhvika*, *maireya*, *ásava*, and *sur*

all strong spirits prepared in different ways. The first was distilled from the ripe fruit of the kadamba *(Nauclea kadamba)*, which is highly saccharine, but not edible in its natural state. Baladeva was particularly fond of this drink, and his name is rarely mentioned in the Puráṇas without some reference to it. In the present day, the fruit is not used in any way, and only affords a repast to the large frugivorous bats called flying-foxes. The second was distilled from the ripe petals of the *Bassia latifolia*,—the mowá of the North-West Provinces, where it is to this day extensively manufactured for the use of the lower orders of the people. The third was rum seasoned with the blossoms of the *Lythrum fruticosum*. The fourth was pure rum. And the last arrack distilled from rice-meal. These spirits were, I imagine, always drunk neat, for there is no mention any where of their having been diluted; and hence probably was the necessity of eating a little of sugared or salted cake or subacid fruits after every draft, to take off the pungency of the drink from the mouth. At the picnic under notice, fried birds are held in especial requisition for this purpose. There are several words in the Sanskrit language to serve as generic names for these "wine biscuits," and no description of a drinking bout is complete without reference to such eatables. Even in the present day, no native ever thinks of drinking without having some such food by his side.

The description of the banquet is also remarkable. The *pièce de resistance* at the meal was not rice or bread, as one would expect in India, but roast buffalo, which seemed to have been a favourite dish with the Hindus in former days. I find in the Vana Parva of the Mahábhárata that buffalo-meat was publicly sold in the market,* and the stalls

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* मांगमाहिषमांसानि विक्रीणन्त तपस्विनं ।
आकुलत्वाच्च क्रेतव्यामेकान्ते संस्थितो द्विजः ।
वनपर्वणि २०६ अध्याये १२७११ श्लोकः ।

displaying it were crowded by customers. In Káshmír, such meat, *I am told, is regularly sold in the present day* to Hindu purchasers, and the lower orders of the people in Bengal, such as Muchis, are particularly fond of it. The meat was roasted on spits, ghi being dropped on it as the dressing proceeded, and seasoned with acids, sochel salt, and sorrel leaves. In the time of the Ṛig Veda the meat was cooked with milk, and there is a passage in which Vishnu is described as carrying away the broth made of a hundred buffaloes and a hog.* Elsewhere it is said (VI., 17, 11.) "For thee, Indra, whom all the Maruts, in concert, magnified Pushan and Vishṇu cooked a hundred buffaloes. For him three lakes discharged the Vritra-slaying, exhilarating Soma."†

Venison was liked in a boiled state, dressed in large haunches, and garnished with sorrel, mangoes, and condiments. Shoulders and rounds of other kinds of meat in large pieces were boiled, roasted on spits, or fried in ghi, and sprinkled over with sea-salt and powdered black-pepper.

Beef, however, is not mentioned as forming an ingredient in the feast, although the Mahábhárata elsewhere describes a king named Rantideva who used to slaughter daily two thousand heads of cattle, besides as many other animals, for use in his kitchen. He is described as a most virtuous king, who acquired great religious merit by daily feeding innumerable hosts of beggars with beef.‡

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* विश्वेत्ता विष्णुराभरदुरुक्रमस्त्वेषितः।
शतं महिषान् क्षीरपाकमोदनं वराहमिन्द्र एमुषं॥ VIII., 66, 10

† Muir's Sanskrit Texts IV. 70.

‡ राज्ञो महानसे पूर्व्वं रन्तिदेवस्य वै द्विज।
द्वे सहस्रे तु वध्येते पशूनामन्वहं तदा।
अहन्यहनि वध्येते द्वे सहस्रे गवां तथा।
समांसं ददतो ह्यन्नं रन्तिदेवस्य नित्यशः।
अतुला कीर्त्तिरभवन्नृपस्य द्विजसत्तम।
वनपर्व्वणि २०८ अध्याये ११८०८—१०—११ श्लोकाः।

Curries were likewise prepared with meat; but they did not take a prominent part in the bill of fare. Even little birds were preferred roasted on spits to being fried or curried. The text is silent as to the species of the birds used; but in the Gṛihya Sútra of Ás'valáyana, partridges *(tittiri)* are recommended as appropriate for infants just beginning to take solid food, and ducks, doves, pigeons, and ortolans were formerly in common use.

For sauces and adjuncts, tamarind, pomegranates, sweet-basil, sub-acid herbs, ginger, assafœtida, and radishes were largely used.

The text is not clear as to whether the buffalo meat was roasted entire, or in cut pieces, but the haunches, shoulders, and rounds, dressed entire, must have necessitated some kind of carving. As no allusion is, however, anywhere made to knife and fork, it is to be supposed that "the cooks, who, under the superintendence of diligent stewards, served at the feast," must have carved the meat before offering it to the guests, in the same way as is done in Persia, Arabia, and other Muslim countries. It was in fact the French custom of carving on the side-board, which is so fast gaining ground in England. The idea of such carving just before serving, is horrifying in India in the present day, and no meat food is dressed in larger pieces than what can be served to one person. Sweetmeats and cakes, when intended for offerings to gods, are sometimes made very bulky, but when prepared for man they are seldon made larger than what would suffice for one individual.

Of cakes, the text does not afford a good list, nor does it mention their constituents in any detail. Sugar and cheese are the only substantial materials named, and salt, ginger, saffron, and ghi as adjuncts. The only three kinds of made-cakes I can recognize are *árdra,* a cake made of sugar and cocoanut gratings spiced with ginger, now called *ádraki;*

candied sugar coated with tila seed—*Khandaka*, now known as *elrakhandi;* and *ghrita-puryaka* a compound of flour, sugar, and ghi, common in the present day in the North-West under the name of *ghevar*. These were partaken along with wine as dessert, after the first course of meat had been finished.

It is not distinctly mentioned whether the ladies joined the party at the first meal, but as they were present at the dessert and regaled themselves with spirits, roasted birds, and sweetmeats, and the elders, who did not partake of flesh-meat and spirits, remained in the company, and made their repast on vegetables, fruits, curds, milk, whey, cream and the like, the inference becomes inevitable that the woman-kind did sit with their lords at the first course, and partake of the meat food. This may appear shocking to modern Hindu ideas of propriety, but where the whole course of life and rules of social relationship were entirely different, this departure from strict etiquette, even when opposed to the maxims and canons of the Sástras, cannot be taken to be such as not to be probable.

The descriptions of dancing, singing, music, and dramatic exhibitions speak for themselves, and call for no remark. In dancing, the practice seems to have been for each man to take his wife for his partner, and accordingly we see Baladeva dancing with his wife Revatí, Krishna with Satyabhámá, and Arjuna with Subhadrá. Those who had no wives with them, danced with public women; but they all danced and sang together, in the same arena without any sort of restraint. Those who were so unfortunate as not to get partners danced by themselves, and often became the butt of their neighbours' wit and humour. The part which the sage Nárada takes in dancing, gesticulation and mimicry, and as the butt of every practical joke, is worthy of particular note, as showing that the saintly character of ancient

dáraka. Appointing king Vasudeva and Ugrasena regents for the management of state affairs, he started with the rest (of his family).

"The wise Baladeva, the lord of regions, Janárdana and the princes, earthly lords of god-like glory, issued forth in separate parties. Along with the handsome and well-adorned princes, came thousands of prostitutes. These dealers on their beauty had been originally introduced into Dváráwatí by the mighty Yádavas, who had brought them away from the palaces of the Daityas whom they had conquered. These were common harlots who had been kept for the entertainment of the Yádava princes. Krishna had kept them in the city with a view to prevent unseemly brawls which, at one time, used to take place on account of women.

"Baladeva went out with his affectionate and only wife, Revatí, on whom the glorious chief of the Yadu race, entertained the feeling which the Chakraváka has for his mate.* Adorned with garlands of wild flowers, and jubilant with draughts of kadamba wine, he disported with Revatí in the ocean waters.

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* The Bráhmaní drake, *Anas rutila*, is said to be the most constant of husbands. Separated at night from each other, the drake and the duck, mourn their hard fate, and send forth from the opposite banks of a river their lamentations to each other; "Chakwi, may I come?" "No, chakwá." "Chakwí, may I come?" "No, chakwi," being the burthen of their woe. The legend has it that two lovers, *for some indiscretion*, were transformed into Bráhmaní drake and duck, and condemned to pass the night apart from each other on opposite banks of a river. A Bengali epigram says, a fowler shut up a drake and a duck in the same cage at night, whereupon said the duck: "How happy even this sad state when the fowler appears kinder than our fate."

চক্রবাক চক্রবাকী একই পিঞ্জরে ।
নিশাযোগে নিষাদ আনিল এক ঘরে ।
চকী বলে চকাপ্রিয় এবং কৌতুক ।
বিধি হতে ব্যাধ ভাল এত সুখে দুখ ।

accomplishment he was in every way worthy of them, and so they devoted themselves to his gratification, to win his sweet smile, and delightful converse, and charming affection.

"The accomplished and heroic princes, in a separate company, entertained themselves in the sea-waters with the damsels that had come with them, and who were proficient in dancing and singing. Though forcibly brought away from their homes, these women had been overcome by the suavity of the princes; and the latter in their turn were delighted with the singing and acting and dancing of these excellent persons.

"At this time, Krishna sent for Panchachúḍá, Kauveri, Máhendri, and other accomplished Apsarases to heighten the pleasures of the entertainment, and when they, with folded hands, appeard before him, and saluted him, the Lord of the universe spoke to them most encouragingly, and desired them to join the fête without fear. 'For my sake,' said he, 'O fair ones, entertain the Yadus, exhibit to them your rare proficiency in dancing and singing, as well as in acting and music of diverse kinds. These are all myself in different persons, and if you entertain them well, and acquit yourselves becomingly, I shall grant you all your desires.'

"The charming Apsarases respectfully received the order of Hari, and entered joyfully the pleasant throng of the noble heroes. Their advent on the waters shed new lustre on the wide ocean, like lightning playing on the breast of heavy dark clouds. Standing on water as on land, they played on aquatic musical instruments, and enacted heavenly scenes of delight. By their aroma and garlands and toilette, by their coquetry, blandishment, and wanton dalliance, these sweet ones with beaming eyes robbed the minds of the heroes. By their side glances and hints and smiles, by their assumed arrogance and mirth and complaisance, they completely charmed their audience. When the princes were excited

with wine, these bewitching actresses lifted them high in the air, and anon held them in their hands, looking at them with enchanting grace.

"Kṛishṇa himself commenced the same pastime with his sixteen thousand wives for their gratification, and this did not excite the ridicule or wonder of the Yádavas, for they knew his worth and nature, and preserved their gravity. Some ran to the Raivataka hill, some to houses, and some to the jungle, whatever suited them best, and returned immediately after. By order of Vishṇu, the lord of regions, the undrinkable water of the ocean then became drinkable, and the damsels with beaming eyes, taking each other by the hand, walked on the water as on land, now diving deep, and anon rising on the surface.

"Of eatables and drinkables, of things to be chewed, of things to be swallowed, of things to be sucked, and of things to be licked, there was nothing wanting, and whatever was desired was immediately forthcoming.

"Wearing fresh garlands, these faultless women, never to be overcome, entertained themselves in private in the cabins of pleasant boats even as do the gods.

"Having thus bathed, the Andhakas and the Vishṇis in the afternoon entertained themselves by perfuming their persons with unguents on board their boats. Some of the cabins in these vessels were wide, others square, others circular, others like the svastika, others like the Mandára hill, while others like the Kailása and the Sumeru mountains. Some were shaped like birds, some like wolves, some like the painted Garuḍa, some like cranes, some like parrots, and some like elephants; some painted with gateways of lapis-lazuli, some gilt, some bedecked with rubies and pearls and lapis-lazulis, and other gems,—all designed for the purpose by Vis'vákarmá. Guided by able seamen, these boats, bright as gold, added new lustre to the billows. Pleasure boats and tenders and large

vessels with commodious cabins adorned the breast of th flowing main. When these noble vessels moved about on th sea, they seemed like the abodes of Gandharvas floating i the air. The heavenly architect, Vis'vakarmá, had, in thes cabins, depicted gardens and trees and tanks and festal hall and cars in imitation of those in the Nandana Park of Indra and they were in no way inferior to their heavenly archetypes

"By order of Vishṇu birds were singing sweetly an delightfully in the forest; white cuckoos of paradise cooe mellifluently for the gratification of the heroes, peacocks surrounded by their hens, danced gracefully on the tops o the cabins resplendent as moonbeams. The flags of th vessels bore the pictures of birds, and the garlands on th vehicles were musical with the hum of bees. By order o Náráyaṇa the trees (in the neighbourhood) produced fragran flowers of all season. The zephyr, loaded with the pollen o various flowers and the aroma of the sandal-wood, blev gently, driving away all exhaustion—now warm and anon cool according to the varying desires of the picnicians. No hunger, no thirst, no langour, no ennui, no grief assailed them, when through the grace of Vásudeva, they were engaged in this delightful fête of music, singing and dancing.

"Thus did these god-like heroes, protected by the wielder of the discus, occupy themselves in their aquatic recreations, spreading over many leagues (yojanas) of the sea, the abode of waters.

"For the sixteen thousand wives of Krishna, Vis'vákarmá had provided appropriate vessels bedecked with the choicest jewels to be found in the three regions of the universe, and furnished with becoming wardrobes. Each wife had her separate cabin, decorated with lapis-lazuli, gold, and floral treasures of every season, and redolent with the finest perfumes.

"The long armed and handsome Baladeva, covered with sandal paste, with eyes glowing crimson under the influence

of kádambari wine, and unsteady steps, paid his attention solely to Revatí. Dressed in two pieces of sky-blue cloth, bright complexioned as the moon, and languishing-eyed, he appeared charming, like the moon partially hidden under a cloud. With a beauteous ear-ring on the left ear only, and a pretty lotus on the other, beholding the smiling face and arching glance of his love, he entertained himself with her.

"Now, by order of Kṛishṇa, the destroyer of Kañs'a and Nikumbha, the charming band of heavenly nymphs repaired to the place of Baladeva to enjoy the sight of Revatí. They saluted Revatí and Baladeva, and then spreading around them, some of the fair and lovely ones danced, while others sang to the sweet cadence of music. Earnest in their desire to entertain Bala and his consort, the lovely daughter of king Revata, and by their desire, they exhibited various dramatic scenes, such as they thought would prove entertaining. Some of the damsels of fascinating forms, assuming the dress, language, and action of particular places, acted with great delight, beating time with their hands. Some sang the auspicious names of Saṅkarshaṇa Adhokshaja, Nandana, and others. Some enacted romantic scenes from the life of Kṛishṇa, such as the destruction of Kañs'a and Pralamba; the overthrow of Chánura; the tying of Janárdana round the waist by Yasodá, which spread wide her fame; the slaughter of the giants Arishṭa, Dhenuka, and S'akuṇi; the life at Vraja; the breaking of the two Arjuna trees; the execution of Vṛikas, (wolves); the discomfiture of the wicked Nága king Kálíya in a whirlpool of the river Yamuná; the recovery of certain blue lotuses from a lake after destroying the demon S'aṅkha; the holding up of the hill Govardhana for the protection of kine; the straightening of the humpback of the sandal-paste-grindress Kubjá; the reduction of Kṛishṇa's own faultless body into a dwarf; the overthrow of the Saubhas, the aerial city of Haris'chandra; the assumption of the name Haláyudha, or wielder

of the ploughshare; the destruction by him of the enemies of the Devas; the defeat of the mighty kings of Gándhára, tying them behind his car, and the rape of their daughters; the abduction of Subhadrá; the victory over Baláhaka and Jambumáli, the loot of jewels, through his soldiers, from Indra. These and others, most delightful subjects, gratifying to Baladeva and Kṛishṇa, were enacted and sung by those beautiful women.

"Inflamed by plentiful libations of kadamba liquor, Balaráma the majestic, danced in joy with his wife, the daughter of Revata, sweetly beating regular time with his own hands. Beholding this, the damsels, were delighted. The wise and noble Kṛishna, to enhance the enjoyment of Bala, commenced to dance with his wife, Satyabhámá. The mighty hero Pártha, who had come to this sea-side picnic with great delight, joined Kṛishna and danced with the slender and lovely Subhadrá (his wife). The wise Gada, Sárana, Pradyumana, Sámba, Sátyaka, the heroic son of the daughter of Sátrajit (Satyabhámá), the handsome Chárudeshna, the heroic princes Nisata and Ulmuka the sons of Baladeva, Sahkava, the generalissimo of the army of Akrura, and others of the heroic race, danced in joy. By the grace of Krishna, the pleasure boats flourished under the dense crowd of the foremost dancers of the Bhaima race. Through the [illegible] glory of the heroic and most ardent dancers of the Yadu race, the creation smiled in joy, and all the sins of the princes were [illegible]

"The Bráhman sage Nárada, the [illegible] came to the scene for the gratification of [illegible] and [illegible] the midst of the noble Yádavas began to dance [illegible] locks all dishevelled. He became the central [illegible] scene, and danced with many a [illegible] of his body, laughing at Satyabhámá and [illegible] and Subhadrá, at Baladeva, and [illegible] king of Revata. [illegible] of others [illegible]

means, he set all a-laughing who had hitherto preserved their gravity. For the delectation of Krishṇa, imitating the mildest little word of his, the sage screamed and laughed so loudly and repeatedly, that none could restrain himself, and tears came to their eyes (from immoderate laughing). By desire of Krishṇa, the ladies gave to Nárada presents of costly jewels and dresses of the rarest description; they showered on him also pearls and celestial garlands of the choicest kind and flowers of every season.

"When the dance was over, Krishṇa took by the hand the venerable sage Nárada of imperturbable mind, and coming to the sea water along with his wife Satyabhámá, Arjuna and others, addressed Sátyaki with a smile, saying, 'let us enter the delightful water with the ladies in two parties. Let Baladeva with Revatí be the leader of one party, consisting of my children and half of the Bhaimas; and let the other half of the Bhaimas and the children of Bala be on my side in the sea water.' Turning then to the regent of the sea, who stood with folded hands before him, the delighted Krishṇa said to him: 'Let thy waters be fragrant and clear, and divested of noxious animals; let them be cheering to the sight, and ornamented with jewels, and pleasant to walk upon. Knowing by my grace what is in each person's mind, render yourself agreeable to one and all. Render thy waters drinkable or undrinkable, according to each individual's choice; let thy fishes be inoffensive and diversified in colour like gold and jewels and pearls and lapis-lazuli. Hold forth all thy jewels, and lotuses, red and blue, blooming and fragrant and soft, full of sweet-flavored honey, over which the bees should pour their hum. Place on thy waters urns full of maireya,* mádhvika,† surá,‡ and

* Spirituous liquor made of the blossoms of *Lythrum fruticosum* with sugar.

† Ditto made of the blossoms of the *Bassia latifolia*.

‡ Ditto of rice-meal,—arrack.

ásava,* and supply the Bhaimas golden goblets wherewith to drink those liquors. Let thy mighty waters be cool and calm and redolent with rafts full of flowers; and be mindful that my Yádavas be not in any way incommoded.'

"Having thus issued his orders to the sea, he commenced to play with Arjuna, while Satyabhámá, incited by a wink of Kṛishṇa, began to throw water on Nárada. Then Balaráma, tottering with drink, with great glee fell into the water, and beckoning the charming daughter of Revata by his side, took her by the hand. The sons of Krishṇa and the leading Bhaimas, who belonged to the party of Ráma, joyous and bent on pleasure, unmindful of their dresses and ornaments, and excited by drink, followed him into the sea. The Bhaimas belonging to the party of Krishna, headed by Nishaṭha and Ulmuka, arrayed in many-coloured garments and rich jewels and bedecked with garlands of párijáta flowers, with bodies painted with sandal-wood paste and unguents, excited by wine, and carrying aquatic musical instruments in their hands, began to sing songs appropriate for the occasion. By order of Kṛishṇa, hundreds of courtezans, led by the heavenly Apsarases, played various pleasing tunes on water and other instruments. Always bent on love, these damsels, proficient in the art of playing on musical instruments in use on the aerial Ganges,† played on the instrument called *Jaladarddura*‡ and sweetly sang to its accompaniment. With eyes glorious as lotus buds and with chaplets of lotuses on their crowns, these courtezans of paradise appeared resplendent as new-blown lotuses. The surface of the sea was covered by the reflection of hundreds of moon-like feminine faces, seeming as if by divine wish thousands of moons suddenly shot forth in the firmament. The cloud-like sea was relieved by

* Ditto of sugar,—rum.

† It is supposed that there is a counterpart of the terrene Ganges in the sky.

‡ I cannot find any description of this instrument in treatises on [illegible]

these damsels like dazzling streaks of the charming mistresses of the thunderbolt,—even as the rain-bearing cloud of the sky is set off by lightning. Krishṇa and Nárada, with all those who were on their side, began to pelt water on Bala and his party; and they in their turn did the same on the party of Krishṇa. The wives of Bala and Krishṇa, excited by libations of arrack, followed their example, and squirted water in great glee with syringes in their hands. Some of the Bhaima ladies, over-weighted by the load both of love and wine, with crimson eyes and masculine garbs, entertained themselves before the other ladies, squirting water. Seeing that the fun was getting fast and furious, Krishṇa of the discus-hand, desired them to restrain themselves within bounds; but he himself immediately joined in play with Nárada and Pártha to the music of the water instruments. Though they were ardently engaged in their entertainment, still the moment Krishṇa expressed his wish, the Bhaima ladies at once desisted, and joyously commenced to dance for the gratification of their lovers.

"On the conclusion of the dance, the considerate lord Krishṇa rose from the water, and, presenting unguents to the learned sage, put them on himself. The Bhaimas, seeing him rise from the water, followed his example, and, putting on their dress, repaired by his order to the banquetting hall There they took their seats according to their respective ranks, ages, and relationship, and cheerfully commenced the work of eating and drinking. Cleanly cooks, under the superintendence of diligent stewards, served them large pieces of meat roasted on spits, and meat cooked as curries, and sauces made of tamarinds and pomegranates; young buffaloes roasted on spits and dressed by dropping ghi thereon; the same fried in ghi, seasoned with acids and sochel salt and sorrel leaves; large haunches of venison boiled in different ways with sorrel and mangoes, and sprinkled over

with condiments; shoulders and rounds of animals dressed in ghi, well sprinkled over with sea-salt and powdered black-pepper, and garnished with radishes, pomegranates, lemon, sweet basil, *(Ocymum gratissimum,)* assafœtida, ginger, and the herb *Andropogon schœnanthus.* Of drinkables, too, of various kinds, the party partook most plentifully with appropriate relishes.* Surrounded by their loved ones, they drank of marieya, mádhvika, surá, and ásava, helping them on with roasted birds, seasoned with pungent condiments, ghi, acids, sochel salt, and oil; cakes of rich flavour, some made with clayed sugar, some colored with saffron, and some salted; ginger comfits, cheese,† sweet cakes full of ghi, and various kinds of candied stuffs.

"Udhvava Bhoja and others, respected heroes who did not drink, heartily feasted on various kinds of cooked vegetables and fruits, broths, curds, and milk, drinking from cups made of shells fragrant rasála of diverse kinds‡ and milk boiled with sugar.

"After their feast the gallant Bhima chiefs, along with their ladies, joyfully commenced again to sing such choice delightful songs as were agreeable to the ladies. The Lord Upendra (Krishṇa) was pleased at night to order the singing of the *chhálikya* song which is called *Devagandhárva.* There-

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* *Upa larasa.* The commentator Nilakantha takes this word for drinking goblets. Wilson in his dictionary explains it to mean, "a relish, or something to promote drinking." The last has the support of ancient lexicons.

† Rasála is a kind of sherbet made with cream, curds, sugar and spices largely diluted with water.

‡ The commentator Nilakantha has failed completely in explaining some of the words; *kilâta* for instance, he takes to be an adjective meaning [illegible] made of buffalo milk, whereas its true meaning is cheese, and the word in the [illegible] form [illegible] is still current in the vernacular for [illegible]. The two words preceding it in the text are *[illegible]*, salted and moist or juicy, *i.e.*, salted plump cheese. The commentator, however, takes the word *[illegible]* for a noun meaning ginger comfits.

upon Nárada took up his Viná of six octaves whereon could be played all the six musical modes (rága) and every kind of tune, Krishṇa undertook to beat time with cymbals, and the lordly Arjuna took up a flute, while the delighted and excellent Apsarases engaged themselves in playing on the mridañga and other musical instruments. Then Rambhá, the accomplished actress, cheerfully rising from one side of the court, delighted Ráma and Janárdana by her acting and her exquisitely slender figure.

"Then Urvasí, of the sparkling eye, Hemá, Mis'rakés'í, Tilottamá, Menaká, and others, for the gratification of Krishṇa, acted and sang whatever was calculated to prove agreeable and pleasing to the company."

After this follows an eulogium on the Chhálikya tune, which was sung in six octaves, and in various modes. The young and the old alike joined in the song, in order, evidently, to bring all the six octaves into play which no single human voice could compass. Originally, it was a spécialité in the concerts of Indra in heaven. On earth Baladeva, Krishṇa, Pradyumna, Aniruddha and Sámba were the most proficient in it, and they taught it to the other Yádavas. Songs for this tune, I understand from my friend, Rájá Saurendramohan Tagore, who has made the Hindu science of music his special study, and possesses a critical knowledge of the subject, were composed of lines of 26 Syllables, and scanned in groups of four syllables, the first two being long, the next short, and the last circumflex. The measure of time *(tála)* for singing it was the same, *i. e.*, of two double instants, then one single instant, and lastly a triple instant, making together a measure of eight instants. This measure was called *Chachchatpuṭa.* The subject of the song was always something fierce and heroic. I annex at, foot the Sanskrit quotations from the *Sañgita Ratnávalí* and the *Sañgita Darpaṇa* furnished me by my friend in sup-

port of his explanation.* On the conclusion of this song which was sung by different parties, and repeatedly encored Krishṇa rewarded the dancing girls and the heavenly actresses, and the company broke up.

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* सङ्गीतरत्नावल्यां तदुक्तं श्रवणागतं श्रवणे श्रावणमन्ते तद्गतम्-
प्रतीयमानं मनः श्रोतृस्त्रायकं मनोहरं श्रोतॄणां छालिक्यं छालिक एव
छालिक्यः षोड़शविधध्रुवकान्तर्गतध्रुवकगीतविशेषस्तं प्रजगिरे प्रजगुः
श्वात्मनेपदमार्षं। छालिकलक्षणन्तु सङ्गीतरत्नावल्याम् यथा,—

ताले चञ्चत्पुटे घोर रौद्रयाः मकरार्धदः।
षड्विंशत्यक्षरपदो ललितश्छालिको मतः॥ इति।

अस्यार्थः,—चञ्चत्पुटे शिवस्य सद्योजात-वामदेवाघोर तत्पुरुषेशाननामानि पञ्चवदनानि तेषामाद्यात् सद्योजातात् समुत्पन्ने पञ्चविधमार्गतामान्तर्गततालविशेषः। तदुक्तं सङ्गीतदर्पणे ५ ताले चञ्चत्पुटे ऐदं गुरु द्वन्द्व सद्युतं। ६६। ७ "सद्योद्भवः शक्तवर्णश्चञ्चत्पुट इति। घोररौद्ररसप्रस्तावपदविन्यासाश्रयः षड्विंशत्यक्षरयोजित मनोहरो गीतविशेष स एव छालिक्यः सङ्गीतवेदिभिरभिमत इत्यर्थः।

# INDEX.

# INDEX.

# INDEX.